# Earth Day 2025 and Sustainable Existence on our Planet.

# Population growth, Global Warming, Fires in Los Angeles,

# and "an essentially worthless fish called a smelt"

By William E. Jackman, PhD
March 2, 2025

This letter/essay is posted at https://www.jackmanstatistics.com/commentary.html in the **Earth Day and Sustainable Existence** section along with previous annual letters on this subject. Previous letters have also been copied and pasted into an email and distributed via email. However, this Earth Day 2025 letter/essay is **only available online**. This year's letter is more substantial than past letters and has lots of graphics. Graphics are not well preserved when copied and pasted into an email and sometimes are dropped.

https://www.jackmanstatistics.com/documents/Earth_Day_2025.pdf

Mr. Kevin Jenkins
Interim Mayor of the City of Oakland, California
Dear Mayor Jenkins,

Congratulations on being chosen to serve as the Interim Mayor of Oakland until the special mayoral election on April 15, 2025. This is a significant honor given that you are in just your first term as Oakland City Council Member from District 6, elected in 2022.

I, like you, am a graduate of Oakland High School, and I, like your son Elijah, am a second-generation Oaklander. I am also a second-generation Irish-American who grew up with immigrant Irish grandparents and aunts in Oakland.

**A livable future for those who follow us**

I know you are concerned about leaving a livable future to your son Elijah and to all of us, now and in the future. This means taking care of the planet that makes our lives possible. Your predecessors, Libby Schaaf and Sheng Thao, were also concerned about taking care of our planet and showed a strong interest in environmental issues. **I wrote an Earth Day letter to them each year for ten years**, to Libby during her eight years as Mayor of Oakland and to Sheng during her two years as Mayor of Oakland. Both were receptive to the issues I presented in my Earth Day letters as I believe you will also be.

**Oakland Mayoral Election on April 15, 2025**

There is a special election on April 15, 2025 to elect the new mayor of Oakland, and the results of the election may not be known until several weeks later (as happened in the last Oakland mayoral election). It is likely that you will still be the Interim Mayor of Oakland on Earth Day 2025 which is on April 22, 2025. **So, I am writing my Earth Day 2025 letter to you, the current mayor of Oakland.**

## Earth Day 2025 and Sustainable Existence on our Planet. Population growth, Global Warming, Fires in Los Angeles, and "an essentially worthless fish called a smelt"

## Contents

Sustainable existence on a finite planet. p. 4

Tipping Points (warning signs). p. 10

Wildfires in Los Angeles and unsustainable population growth. p. 13

Unsustainable population growth is the major driver of global warming. p. 13

World total CO2 emissions up 116.7 percent, 15 times the per capita increase. p. 16

Business pushes for larger populations that are not sustainable. p. 25
More competitive in trade in 1960 with 161.8 million fewer people. p. 27
Less diverse nations with smaller populations are beating us economically. p. 30
A Sustainable Existence Impact Analysis (SEIA) must be a requirement. p. 36
Species Preservation. p. 37
No more opossums but a whole lot more accessory dwelling units (ADUs). p. 38
The California Delta Smelt, “an essentially worthless fish.” p. 41
Other “essentially worthless” species? p. 51
The California Condor, “an essentially worthless” bird? p. 52
The California mountain lion, “an essentially worthless” animal? p. 57
The California gray wolf, “an essentially worthless” animal? p. 67
The California Chinook salmon, “an essentially worthless” fish? p. 82
The California grizzly bear, “an essentially worthless” extinct animal? p. 92
A requirement for using the California grizzly bear on our state flag. p. 96

## Earth Day 2025 and Sustainable Existence on Our Finite Planet

Our Earth is a closed system, with a finite amount of matter on our planet and in its atmosphere. **Earth Day is dedicated to the health of our finite Planet and to our sustainable existence within its finite limits.**

## What population levels are compatible with Sustainable Existence on Our Finite Planet?

Sustainability refers to the population size which our finite planet can **sustain indefinitely** (for example, in 1,000 years in the year 3025) at the minimum standard of living we can accept. For example, what is the maximum population size Earth can sustain during the next 1,000 years so that our descendants in 3025 in the United States can have the same standard of living that we have in the United States today?

**Note:** Our planet can sustain a larger population at subsistence levels at which per capita resource requirements are low than it can at higher standards of living such as those of the United States.

Our standard of living includes environmental amenities we choose such as open space for species preservation, biodiversity, and the preservation of wilderness. These environmental amenities add to our quality of life and happiness. However, these environmental amenities may impede population and economic growth.

## Business groups favor population growth.

Business groups worry that providing environmental amenities can impede population growth and the economic growth it drives. Historically and currently, business has pushed for population growth because it drives business profitability. Population growth provides more workers – who compete against each other to work for less – and more

consumers who drive economic growth. Consumer spending is the main engine of the U.S. economy, accounting for about 70% of GDP. What population levels does business push for today?

## What is the largest population that business groups believe Earth can sustain?

The world population more than doubled in fifty years.

The world population in 2023 was 8.09 billion, having grown 4.19 billion in **fifty years** since 1973 when it was 3.90 billion. (1973 was three years after the first Earth Day in 1970.) Note that the 2023 population is more than twice the 1973 population (8.09/3.90=2.074), so the **growth** of 4.19 billion is 0.29 billion greater than the absolute **level** of the 1973 population of 3.90 billion. (4.19-3.90=0.29).

## Business wants more workers and more consumers.

Although the U.S. population more than doubled in fifty years, business groups want more population growth. They say there is a shortage of workers because the Baby Boomers are retiring, often early, creating a worker shortage. They also say that the United States needs more consumers to power our economic growth. Consumer spending makes up about 70% of the US economy. (Note: American consumers' ability to continue driving the U.S. may be diminished by growing consumer debt. A recent report from the Federal Reserve Bank of New York informs the share of outstanding U.S. consumer debt that is in delinquency rose in the fourth quarter [of 2024] to the highest in almost five years.)

## Differences between the United States and China

While the U.S. economy grows mainly from more consumer spending driven by a growing number of consumers, China's economy grows largely by exporting. Many of the common consumer products Americans buy such as flat screen TVs, iPhones*,

computers, external drives, flash drives, bicycles, motorcycles, lamps, electric fans, toasters, coffee makers, microwave ovens, exercise machines, hand and power tools, garden tools, smoke detectors, hardware items, pet supplies, wrist and back braces, and shoe horns are made in China. Our domestic capacity to make such common consumer products has severely eroded or no longer exists. *Most iPhones are made in China. Some, mostly older models, are made in India or Vietnam. (Jan 4, 2024)

(**Note: "Is China cheating?"** There are loud and persistent complaints that the large trade deficit the United States has with China occurs because "China is cheating." This essay is on Earth Day 2025 and Sustainable Existence on our Planet, not on economic competitiveness. So, this issue of whether "China is cheating" will not be discussed here. However, it was discussed substantially in my Memorial Day 2021 essay on economic competitiveness, especially in the chapters cited below.

https://www.jackmanstatistics.com/documents/Memorial_Day_2021_Essay.pdf

VII. The Loss of our "Industrial Commons", pp. 39-42

VIII. A Different Economic Paradigm: a National Economic Strategy, pp. 42-51

IX. China's Rapid Economic Ascent Due to Real Economic Factors, Not Exchange Rates, pp.51-54

X. China's Lower Standard of Living and Lower Wages:

A Key to Its Economic Success? pp.54-60

XI. The Issue Is Not Democracy vs. Autocracy. pp. 60-64

The United States and China have different economic systems. The U.S. economy is based on the theory that markets allocate resources more efficiently than human economic planners. So, "picking winners" doesn't work because human economic planners can't possibly take into account the myriad economic factors that markets can take into account. China picks and nurtures winners. So, the U.S. should be glad that our

economic competitor is using an economic system (i.e., picking winners) that is bound to fail. The irony of the "China is cheating" charges is that when China successfully employs an economic system the U.S. says doesn't work, we charge that "China is cheating."

## Would business be satisfied with a world population of 10 or 11 billion people?

The world's population is expected to increase by nearly 2 billion persons in the next 25 years from the current 8.2 billion (8,202,820,149 as of Saturday, February 1, 2025) to 9.7 billion in 2050, to nearly 10.4 billion in the mid-2080s, and to continue growing and reach over 11 billion people by 2100.

## Is a world population of 10 or 11 billion people sustainable?

Estimating the sustainable world population is a challenging task, and estimates vary considerably, from about two billion to 7.7 billion people* although there are some estimates as high as 9 to 10 billion people – unless there are warning signs that 9 to 10 billion people exceeds the Earth's carrying capacity. In fact, there are abundant and clear warning signs (See "Tipping Points" below.)

* https://www.ncesc.com/geographic-faq/how-many-people-can-the-earth-sustain/

## Lower estimates versus higher estimates

Studies done by academic institutions and by population and environmental groups tend toward the lower estimates. **Business prefers to use the higher estimates** of 9 to 10 billion people which they interpret to mean that the world can support almost 2 billion more workers and consumers in addition to the current world population of 8.2 billion.

## The economy is a wholly owned subsidiary of Nature.

There are abundant and clear warning signs that Earth cannot sustain the current the current world population of 8.2 billion much less 9 to 10 billion people (see "Tipping

Points" below). But business tends to dismiss these warnings and continues to push for population growth to have more workers and more consumers (and higher profitably and more favorable quarterly ratings by the stock market). Business assumes that the **environment is an add-on to the economy** and will dutifully provide to the economy what is requested of it.

Business groups appear **not** to comprehend that the economy depends on the environment (or more generally the Earth's carrying capacity), not the other way around. The environment would do just fine without the economy, but not the other way around. Or as the Prince of Wales (now King Charles III) put it, "**the economy is a wholly owned subsidiary of Nature and not the other way around**." (Newsweek, 12/14/2009).

## Estimates of the sustainable world population in the range of 2 - 4 billion people

As noted above, studies done by academic institutions and by population and environmental groups tend toward lower estimates of the sustainable world population. Some examples of these studies follows. (**Note:** The current world population of 8.2 billion is already **more than four times** a sustainable world population of about 2 billion.)

- **NPG Estimates of Sustainable Population Levels:**

  **Should not exceed two billion for the world.**

  NPG (npg.org) has studied sustainability for several decades and has developed expertise on this subject. Their goal for the United States and for the world is population levels that are sustainable for the long haul, e.g., for the next 1,000 years. NPG has recommended an optimal population for the United States of around 150-200 million people (our nation's size in 1970, a golden era of sustainability). More recently NPG has refined their sustainable population recommendations: "We judge that a sustainable population for the United States

should not exceed 150 million, and **should probably not exceed two billion for the world."**

https://npg.org/library/forum-series/proposed-national-population-policy.html

- **What is the maximum human population Earth can sustain?**

  **Between 2 and 4 billion or between 1.5 and 2 billion.**

  "Because these environmental impacts are all directly related to human numbers, recent estimates of a sustainable human population tend to put forward much lower numbers, **between 2 and 4 billion**. "Paul R. Ehrlich stated in 2018 that the **optimum population is between 1.5 and 2 billion.**

  https://en.wikipedia.org/wiki/Sustainable_population#:~:text=Because%20these%20environmental%20impacts%20are,between%201.5%20and%202%20billion.

- **Australian Academy of Science: carrying capacity of around 2 billion**

  "So, if everyone on Earth lived like a middle class American, then the planet might have **a carrying capacity of around 2 billion**."

  https://www.science.org.au/curious/earth-environment/how-many-people-can-earth-actually-support#:~:text=So%20if%20everyone%20on%20Earth,support%20a%20much%20higher%20figure

- **International Union for the Scientific Study of Population (2023):**

  **The sustainable population for the world is below 4 billion.**

  On October 18, 2023, the International Union for the Scientific Study of Population (2023) broadcast a Yes-or-No debate on the statement: "The population of humans that can be supported sustainably on the planet at a reasonable standard of living is **below 4 billion**."

  https://www.niussp.org/environment-and-development/can-earth-support-4-billion-people-sustainably-and-

well/#:~:text=On%20October%2018%2C%202023%2C%20the,abridged%20version%20of%20Joel%20E.

## Tipping Points (warning signs)

As noted above, estimates of the sustainable world population range from about 2 billion to ten billion. Business grabs onto the ten billion estimate, but even the groups that generate these high, optimistic estimates caution that they are not valid if there are clear warning signs (**Tipping Points**) that these population estimates overshoot the carrying capacity of Earth. **In fact, there are abundant and clear "Tipping Points"**.

To maintain current standards of living for unsustainable population levels, humans are taking more from our planet than it can restore and are living in an unsustainable manner.

- **Tipping Point: Wildfires in the Los Angeles area in January 2025**
  (Please see next section).

- **Tipping Point: Study by the United Nations University warns**, "Humans are eating away at their own life support systems at a rate unseen in the past 10,000 years." (NPG newsletter April 6, 2023, p. 1)

- **Tipping Point:** "**Earth's climate has entered uncharted territory.**"
  "But the heat is also just one way the planet is telling us something is gravely wrong, they said."
  "Heat sets the pace of our climate in so many ways… it's never just the heat," said Kim Cobb, a climate scientist at Brown University.
  "Dying coral reefs, more intense Nor'easters and the wildfire smoke that has choked much of North America this summer are among the many other signals of

climate distress."

(by Isbella O'malley of *Associated Press*, "Scientists: Earth's climate has entered uncharted territory" which appeared in the *East Bay Times* of July 7, 2023, p. A4)

- **Tipping Point:** Bonn, Germany, 25 October 2023 – A recent United Nations University report **warns about risk tipping points** with irreversible impacts on people and planet. The report warns of **six risk tipping points** ahead of us:

  Accelerating extinctions

  Groundwater depletion

  Mountain glaciers melting

  Space debris

  Unbearable heat

  Uninsurable future

  "Systems are all around us and closely connected to us: ecosystems, food systems, water systems and more. When they deteriorate, it is typically not a simple and predictable process. Rather, instability slowly builds until suddenly a tipping point is reached and the system changes fundamentally or even collapses, with potentially catastrophic impacts."

- **Tipping Point:** "**Study: Earth is in danger in nearly all ecological ways.**"

  "Earth has pushed past seven out of eight scientifically established safety limits and into 'the danger zone' not just for an overheating planet that's losing its natural areas, but for the well-being of people living on it, according to a new study."

  "The study by the international scientist group Earth Commission published in Wednesday's journal *Nature* looks at climate, air pollution, phosphorus and nitrogen contamination of water from fertilizer overuse, groundwater supplies,

fresh surface water, the unbuilt natural environment and the overall natural and human-built environment."

"We are in a danger zone for most of the Earth system boundaries," the study concluded.

(by Seth Borenstein of *Associated Press*, "Study: Earth is in danger in nearly all ecological ways" which appeared in the *East Bay Times* of June 1, 2023, p. A4)

- **Tipping Point: "Earth's ability to sustain human life in peril"**

  "Earth's life support systems have been so damaged by human activity that the planet is now 'well' outside the safe operating space for humanity,' scientists warn in what's billed as the 'first scientific health check for the entire planet', reports *Smithsonian Magazine*. Researchers at the University Copenhagen in Denmark looked at nine planetary boundaries, benchmarks that lay out the parameters for human survival. They concluded that six of the boundaries have already been exceeded: climate change, biodiversity, freshwater availability, land use, biogeochemical balance (which measures nutrient runoff) and novel entities (which encompasses microplastics and radioactive waste). (*The Week*, "October 6, 2023, p. 19)

- **Tipping Point: Perilous times on planet Earth"**

  A new study published in the journal *Bioscience*, The 2024 state of the climate report: Perilous times on planet Earth, found 25 of Earth's 35 "vital signs" have reached record levels of concern. The researchers examined critical indicators such as carbon dioxide levels, human population, ocean temperatures, and sea ice levels. Unsurprisingly, they determined "the future of humanity hangs in the balance" and Earth is reaching a "critical and unpredictable new phase of

the climate crisis."

https://academic.oup.com/bioscience/article/74/12/812/7808595?login=false

## Population growth, Global Warming*, and Fires in Los Angeles

## A taboo against discussions of sustainable population levels.

(* Global warming" refers to the rise in global temperatures due mainly to the increasing concentrations of greenhouse gases in the atmosphere. Although it is one aspect of climate change, it is the aspect that most affects us.)

## Wildfires in the Los Angeles area in January 2025

Twenty-nine people are known to have died across the Los Angeles area after destructive wildfires fueled by dry conditions and powerful winds erupted January 7, 2025. More than 18,000 structures have been destroyed, and more than 200,000 people were forced to evacuate. The fires are among the most destructive of human property in Southern California's history and rank among the most expensive wildfires in U.S. history.

## Unsustainable population growth is the major driver of global warming and of the January 2025 wildfire disaster in Los Angeles.

Numerous reports have been issued recently identifying global warming as a major factor in the January 2025 wildfire disaster in Los Angeles. However, these reports **fail to Identify unsustainable population growth** as the major driver of global warming.

**There is a taboo against discussing sustainable population levels**.

Examples of these reports/analyses:

**Are wildfires caused by climate change or something else? The question is flawed.** Opinion by Jordan Thomas, January 24, 2025

https://www.msn.com/en-us/weather/topstories/opinion-are-wildfires-caused-by-climate-change-or-something-else-the-question-is-flawed/ar-AA1xN3l7?ocid=BingNewsSerp

**The Burning State: Understanding California's Escalating Fire Seasons**

Story by B.Sc. Jessica Taylor, January 24, 2025

**The Climate's Role**©The Climate's Role (image credits: pexels)

https://www.msn.com/en-in/travel/news/the-burning-state-understanding-california-s-escalating-fire-seasons/ss-AA1xNj2R

**Climate change made conditions that fed California wildfires more likely and intense, study says.** MSN (Microsoft Network) February 1, 2025

https://www.msn.com/en-us/weather/topstories/climate-change-made-conditions-that-fed-california-wildfires-more-likely-and-intense-study-says/vi-AA1y1GZU?ocid=msedgdhp&pc=U531&cvid=8c9aa00fd108446991086937235d1c17&ei=21

**Study Finds Climate Change Increased LA Wildfire Risk By 35%,** January 29, 2025

https://www.msn.com/en-us/weather/topstories/study-finds-climate-change-increased-la-wildfire-risk-by-35/vi-AA1y4LBv?ocid=in-article#:~:text=A%20new%20study%20confirms%20that,Ana%20winds%2C%20fueling%20the%20disaster.

**Unsustainable human population growth is the major driver of global warming, but there is a taboo against discussions of sustainable population levels.**

Unsustainable population levels impair our environment in myriad ways, including global warming. We cannot mitigate nor resolve this grave problem of global warming just by making **per capita** reductions in $CO_2$ emissions if **overall population growth** negates these per capita reductions.

Population growth negates the benefits of per capita reductions in CO2 emissions.

Energy-saving technology has **reduced per capita carbon dioxide emissions** since the first Earth Day (April 22, 1970). **Total carbon dioxide emissions are higher, however, because of population growth**. Even if mileage standards had risen to 47 mpg as proposed by the Obama administration rather than 37 mpg as counter-proposed by the first Trump administration or if they rise to 50 mpg by 2026 as proposed by the Biden administration, **total** carbon dioxide emissions **will still rise** because of population growth, negating the benefits of higher mpg standards. **Human population growth is a major, if not the major, contributor to global warming. But there is a taboo against discussions of sustainable population levels.**

## A look at recent world data

### World total CO2 emissions up 116.7 percent, 15 times the per capita increase.

Note: In this section, population data for **2023** is used to be compatible with CO2 emissions data from 2023, the most recent available. In other sections, population data for **2024** is used.

| World CO2 emissions **per capita** (in metric tons) | | | |
|---|---|---|---|
| 2023 | 1973 | Growth | % growth |
| 4.7 | 4.36 | 0.34 | 7.8% |
| https://www.statista.com/statistics/268753/co2-emissions-per-capita-worldwide-since-1990/ | | | |
| Average per capita carbon dioxide emissions worldwide from 1960 to 2023 (in metric tons) | | | |

metric ton: 2,204.62 pounds

**Per capita** emissions of CO2 for the world rose **7.8%** during 1973-2023.

| **Total** World CO2 emissions (in billion metric tons) | | | |
|---|---|---|---|
| 2023 | 1973 | Growth | % growth |
| 37.01 | 17.08 | 19.93 | 116.7% |
| https://www.statista.com/statistics/276629/global-co2-emissions/ | | | |

**Total** emissions of CO2 for the world rose **116.7%** during 1973-2023.

During the 50 years (1973-2023), per capita emissions of CO2 grew 7.8 percent, but **total** emissions of CO2 grew 116.7% percent, **15 times** the growth of per capita emissions (116.7% /7.8% = **15.0 times**). Why did this occur? **The answer is population growth. But there is a taboo against discussions of sustainable population levels.**

| World Population (in billions) | | | |
|---|---|---|---|
| 2023 | 1973 | Growth | % growth |
| 8.09 | 3.90 | 4.19 | 107.4% |
| https://www.worldometers.info/world-population/world-population-by-year/ | | | |

During the 50 years (1973-2023), world population more than doubled (8.09/3.90=2.074), with a growth rate of 107.4 percent. So, the low world **per capita** increase in CO2 emissions was negated by world population growth, causing **total CO2 emissions** to rise **15 times** the rise in **per capita** CO2 emissions (116.7%/7.8% = 15.0, **15 times**). **But there is a taboo against discussions of sustainable population levels.**

**These results show that world population growth, not per capita increases in CO2 emissions, is the main driver of the growth of world CO2 emissions. But there is a taboo against discussions of sustainable population levels.**

## A look at recent United States data

| United States CO2 emissions per capita (in metric tons) (www.statista.com) | | | |
|---|---|---|---|
| 2023 | 1973 | Growth | % growth |
| 13.83 | 22.75 | -8.92 | -0.392 |

**Per capita** emissions of CO2 in the United States declined 39.2% during 1973-2023.

| United States Total CO2 emissions (in megatons) (www.statista.com) | | | |
|---|---|---|---|
| 2023 | 1973 | Growth | % growth |
| 4,807 | 4,897 | (90.00) | (0.018) |

**Total** emissions of CO2 in the United States declined only 1.8% during 1973-2023.

Unlike for the world, per capita and total emissions of CO2 in the United States declined, but not for the world, during the fifty years 1973-2023. (The reasons for this different result for the United States **are discussed below**.)

Why was the percent reduction in **TOTAL** CO2 emissions in the United States **less than 5 percent** of the reduction in **per capita** CO2 emissions (-0.018/-0.392 = 0.0459, **4.6%**)?

Or put differently, why was the percent reduction in **per capita** CO2 emissions almost **22 times** the percent reduction in **TOTAL** CO2 emissions? (-0.392/-0.018 = 21.8, **22 times**) **The answer is population growth. But there is a taboo against discussions of sustainable population levels.**

| United States Population (www.statista.com) | | | |
|---|---|---|---|
| 2023 | 1973 | Growth | % growth |
| 334,910,000 | 210,284,000 | 124,626,000 | 59.3% |

During the 50 years (1973-2023), population of the United States grew **almost 60 percent** (59.3%), adding 124,626,000 Americans. So, the large **reduction** in **per capita** CO2 emissions (almost 40% (39.25%)) did not result in a large **reduction** in **TOTAL** CO2 emissions which decreased only 1.8 percent because **124,626,000 more Americans were emitting CO2 in 2023** compared to 1973, albeit at a lower per capita rate. **But there is a taboo against discussions of sustainable population levels.**

**Global warming is a planet-wide phenomenon.**

It is important to note that the effects of global warming in the United States are driven by **world** CO2 emissions, not just by **United States** CO2 emissions. So, although United States total CO2 emissions **decreased** by 1.8 percent during 1973-2023, they i**ncreased** for the world by 116.7 percent during the same period. What contributed to the **fires in Los Angeles in 2025** were world CO2 emissions, not just United States CO2 emissions.

World per capita CO2 emissions are a **calculated** number.

It should also be noted that although **world per capita** CO2 emissions are widely cited, it is not feasible to measure individual CO2 emissions. **World per capita** CO2 emissions are a **calculated** number obtained by dividing the **world's total** CO2 emissions by its

population.

**World** CO2 emissions are measurable. The amount of CO2 in the atmosphere is measured at Mauna Loa Observatory, Hawaii, and all around the world. NASA also measures CO2 from space. Data from around the planet all shows the same upward trend. (May 10, 2023)

United States per capita CO2 emissions are also a **calculated** number.

**United States** per capita CO2 emissions, a widely cited figure, are also a **calculated** number obtained by dividing **total** CO2 emissions in the United States by its population. Unlike for the world however, **total** CO2 emissions in the United States are not directly measurable. CO2 measuring stations in the United States measure total **world** CO2 emissions, not just those generated by the United States. **Total** CO2 emissions in the United States are obtained empirically by adding up all the contributions from CO2 emitters such as power plants, factories, and motor vehicles; this is an accounting activity.

## Why did CO2 emissions decline for the United States during 1973-2023 but rise sharply for the world?

As noted above, **per capita** CO2 emissions in the United States **declined** 39.2 percent and **total** CO2 emissions in the United States **declined** 1.8 percent during 1973-2023. However, world **per capita** CO2 emissions **rose** 7.8 percent and **total** world CO2 emissions **rose** 116.7 percent. (Note: The increase in **total** world CO2 emissions was **15 times** the increase in **per capita** world CO2 emissions (116.7%/7.8% = 15.0, **15 times**).

The average American has **NOT** been living a simpler lifestyle.

The reduction in CO2 emissions in the United States during 1973-2023 did **not** occur because the average American has been living a simpler lifestyle than the rest of the

world. In fact, the opposite is closer to the truth: An average middle-class American consumes 3.3 times the subsistence level of food and almost 250 times the subsistence level of clean water. *

* https://www.science.org.au/curious/earth-environment/how-many-people-can-earth-actually-support#:~:text=So%20if%20everyone%20on%20Earth,support%20a%20much%20higher%20figure

The conversion from coal to natural gas in the United States to generate electricity.

The reduction in CO2 emissions in the United States during 1973-2023 occurred because of the conversion from coal to natural gas as the fuel to generate electricity. To generate the same amount of energy (in BTUs, British thermal units), natural gas emits almost 50% less CO2 than coal. Of the fuel mix used to generate electricity in **1973**, 45 percent was coal and 18 percent natural gas. But of the fuel mix used to generate electricity in **2023**, 16 percent was coal and 43 percent natural gas.

Why hasn't the rest of the world converted
from coal to natural gas to generate electricity.

Not all countries have abundant supplies of natural gas which enables the conversion from coal to natural gas to generate electricity without having to import natural gas.

Natural Gas Reserves by Country

| # | Country | World Share |
|---|---|---|
| 1 | Russia | 24.3% |
| 2 | Iran | 17.3% |

| | | |
|---|---|---|
| 3 | Qatar | 12.5% |
| 4 | **United States** | 5.3% |

**Countries with high natural gas reserves tend to be exporters.**

| | Country | Continent | Natural Gas Exports 2022 (million $m^3$)[2] |
|---|---|---|---|
| 1 | United States * | North America | 195,000 |
| 2 | Russia * | Europe/Asia | 176,000 |
| 3 | Qatar * | Asia | 126,000 |
| 4 | Norway * | Europe | 121,000 |
| 5 | Australia * | Oceania | 106,000 |
| 6 | Canada * | North America | 85,000 |
| 7 | Algeria * | Africa | 50,000 |
| 8 | Turkmenistan * | Asia | 45,000 |
| 9 | Netherlands * | Europe | 43,000 |
| 10 | Malaysia * | Asia | 39,000 |

**<u>The United States is only fourth in proven reserves of natural gas</u>**

**<u>but is the leader in natural gas production and natural gas exports.</u>**

Note that although the United States **leads the world** in natural gas production and natural gas exports, it is only fourth in proven reserves of natural gas, behind Russia, Iran, and Qatar.

| | Proven reserves (km³) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Country | U.S. EIA (2021)[6] | OPEC (start of 2018)[7] | BP (end of 2020)[8] | OTHERS | Production km³/year (2021)[9] | Years of production in reserve[10] |
| 1 | Russia * | 47,800 | 47,760 | 37,400 | | 701.55 | 68.1 |
| 2 | Iran * | 34,000 | **33,988** | 32,100 | | 248.3 | 140 |
| 3 | Qatar * | 23,900 | 23,861 | 24,700 | | 169.0 | 141 |
| 4 | United States * | 17,710[11] | 9,067 | 12,600 | | 977.44 | 18.1 |
| 5 | Turkmenistan * | 10,000 | 9,838 | 13,600 | | 87.02 | 100 |
| 6 | Saudi Arabia * | 9,430 | **9,514** | 6,000 | | 115.6 | 81.6 |
| 7 | China * | 6,650 | 2,934 | 8,400 | | 212.0 | 31.4 |
| 8 | United Arab Emirates * | 6,090 | **8,210** | 5,900 | | 63.77 | 95.5 |

https://www.worldometers.info/gas/gas-reserves-by-country/#google_vignette

BP = British Petroleum

U.S. EIA = U.S. Energy Information Administration

OPEC = Organization of the Petroleum Exporting Countries

**<u>Note:</u>** In addition to being the world leader in the production and export of **natural gas**, the U.S. is also the world's largest **producer** of **crude oil** at nearly 22 million barrels daily, with Saudi Arabia, the largest producer in OPEC, at about 11 million barrels. The United States is also the largest **exporter** of crude oil in the world. The country became the world's top exporter of crude oil in 2019 and has maintained the lead position through 2024. (Natural gas and crude oil are **<u>commodities</u>**, products that are generally the same no matter who or what produces it. Other commodities include corn, coffee beans and raw materials like gold and copper.)

## Is the United States living prudently?

Although the United States **leads the world** in natural gas production and natural gas exports, it has by far **the lowest years of production in reserve, just 16 years**, as shown above. Note that the comparable figures for Russia is 68.1 years, for Iran is 140 years, and for Qatar is 41 years. For the sake of our nation, this does not seem like a prudent course to follow. We are running down our relatively low years of production of natural gas **in reserve** to be the top producer and exporter of natural gas in the short-term. Why has this happened? There are at least two major reasons:

- **A net exporter of commodities.** The United States has declined as a major exporter of manufactured goods, especially consumer goods. As noted above, our domestic capacity to make most common consumer products has severely eroded or no longer exists. So, we instead export commodities such natural gas and agricultural goods. Note that our role as a supplier of commodities to manufacturing nations such as China is like the role that Britain's colonies such as India had with Britain, the mother country. The colonies supplied raw materials, but Britain carefully kept manufacturing processes in Britain.

- **CEOs of energy companies** have short-term perspectives (often quarterly). The careers of CEOs rides on quarterly ratings from the stock market (Wall Street). To be successful in their jobs, they must show growth and profitability. Strong and growing exports of natural gas helps their careers, including higher compensations.

## Business continues to push for larger populations for the United States and world that are not sustainable.

Business continues to call for population growth to provide more workers and more consumers to grow the economy (*see below). However, current United States and world populations already significantly exceed their sustainable limits.

### United States: Exceeding its sustainable limit by 131 percent

United States population in 2024 of 345,426,571 exceeded its sustainable limit by 131 percent (345,426,571/150,000,000 = 2.31)
or by 195,426,571 (195.4 million) human beings.
The sustainable population of the United States is about
150,000,000 (150 million) people.

### World: Exceeding its sustainable limit by 310 percent

World population in 2024 exceeded its sustainable limit by 310 percent (8,200,000,000/2,000,000,000 = 4.1)
or by 6,200,000,000 (6.2 billion) human beings.
The sustainable population of the world is about
2,000,000,000 (2 billion) people.

* For example, Jeff Bellisario, executive director of the Bay Area Council Economic Institute, says "Population is a pretty good indicator for the general economic health of the region. Generally, regions struggle to grow economically if they're also struggling to grow their population." (*East Bay Times*, July 1, 2024, p. A1).
"You can draw a pretty straight line between places that grow in population and their economic potential." (*East Bay Times*, July 26, 2023, p. A1).

(The Bay Area Council is a business association based in San Francisco that promotes economic development in the San Francisco Bay Area.)

## Can the United States Move to Sustainable Population Levels for the Sake of Future Generations?

The current U.S population of approximately 340.1 million people is over twice the sustainable level of approximately 150 million people. So, the first step toward a more sustainable U.S. population would be to stabilize our population at its current level and then gradually reduce it. **This will be difficult for U.S. residents to accomplish because they are not the primary determinant of U.S. population levels**. **Immigration is now the "primary driver of U.S. population growth."**

**From the Wall Street Journal: Immigrants dominate U.S. population growth.**

Immigrants are having a huge impact on the nation's population growth, new federal estimates show. Newcomers accounted for **84% of U.S. growth** in the year ended June 30, the Census Bureau said Thursday, continuing a trend since the Covid-19 pandemic. Dec 19, 2024

https://www.wsj.com/us-news/census-data-immigration-state-population-changes-9f8f4508

**From the U.S. Census Bureau: Immigrants dominate U.S. population growth.**

Population growth in the United States was primarily driven by rising net international migration. Net international migration, which refers to any change of residence across U.S. borders (the 50 states and the District of Columbia), was the critical demographic component of change driving growth in the resident population. Dec 19, 2024

https://www.census.gov/newsroom/press-releases/2024/population-estimates-international-migration.html#:~:text=The%20growth%20was%20primarily%20driven,growth%20in%20the%2

0resident%20population

**Reasons for allowing high levels of immigration to the U.S**

There are humanitarian reasons for allowing high levels of immigration to the U.S., **but the dominant reasons advanced are economic**. Businesses say that they need to import workers ranging from computer programmers to dishwashers and everything in between to remain competitive. Business especially stresses the need to import more "smart people." For example, Silicon Valley reports that more than two-thirds of its computer programmers are foreign-born.

**It Will Be Hard for the United States to Move to Sustainable Population Levels because business insists the United States needs a larger population to be competitive.**

Business insists that we need a larger population to be competitive in international economic competition. **But our own historical data does not support this claim.** Recall the "golden age" of U.S. manufacturing after World War II. The period from the end of World War II to the early 1970s was one of the greatest eras of economic expansion in world history. U.S. Gross Domestic Product increased from $228 billion in 1945 to just under $1.7 trillion in 1975.

## We were more competitive in international trade in 1960 with 161.8 million fewer people than we were in 2024.

In 1960, roughly in the middle of the post WWII "golden age" of U.S. manufacturing, the U.S had a trade **surplus** of $3.5 billion with a population of 179.3 million. In 2024, the

U.S had a trade **deficit** of **$84.4 billion** with a population of 341.1 million (341,145,670*), almost twice (1.90 times) our 1960 population (341.4/179.3 = 1.90).

- Apparently, 161.8 million more Americans (341.1 million in 2024 minus 179.3 million in 1960) has not helped the United States become more competitive in international trade.

- And 161.8 million more Americans has made our continued sustainable existence on Planet Earth more tenuous, especially for the Americans who will come after us, for example, a thousand years from now in the Bay Area in the year 3025.

- And 161.8 million more Americans (part of 5.1 **billion** more humans worldwide**) have been the main driver of global warming in the United States and of **the 2025 wildfires in Los Angeles**.

- And 161.8 million more Americans has it more difficult for other species to coexist with us such as the California Delta smelt, the California Condor, the California mountain lion, the California gray wolf, the California Chinook Salmon, and the California grizzly bear. (see discussions below)

**Note:** The **growth** of the United States population of **161.8 million** between 1960 and 2024 is greater than the **absolute level** of the U.S. population in 1954 when it was 158.2 million (158,205,873) people during the height of the post-WWII baby boom.

* This essay uses the projected **2024 year-end** population estimate for the United States of **341,145,670** (341.1 million). The U.S. Census Bureau **mid-year** population estimate for the United States as of July 1, 2024 was **340.1 million**, up 0.98% from 336.8 million

on July 1, 2023 — the highest year-over-year increase since a jump of 0.99% between 2000 and 2001. The U.S. **year-end** population estimate as of December 31, 2024 was projected to be 341,145,670.

### ** World population in 1960 and 2024.

https://www.worldometers.info/world-population/world-population-by-year/#google_vignette

- The world population on December 31, 1960 was 3.0 billion (3,015,470,894).
- The world population on December 31, 2024 was 8.2 billion (8,161,972,572).
- The world population in 2024 was **2.7** times its population in 1960.

  8.2 billion/3.0 billion = 2.7
- The world population **grew by 5.2 billion** between 1960 and 2024.

  8.2 billion - 3.0 billion = 5.2 billion

- The **growth** of world population of **5.2 billion** between 1960 and 2024 was almost **75 percent higher** than the **absolute population level** of 3.0 billion in 1960. (5.2 billion/3.0 billion -1 = 0.73, **73 percent**)

## Less diverse nations with smaller populations which don't import "smart people" are beating us economically.

Business insists that the United States needs to import more "smart people" because it makes more us more competitive internationally and because it makes us more diverse which they claim gives us an edge in international economic competition. **But is this strategy working?**

The following six countries have smaller populations and markedly less diverse populations than the U.S., and they **do not import** lots of "smart people." Yet **they are beating us economically**, invalidating our claim that with current U.S population of approximately 340.1 million we need to import lots of "smart people" to be economically competitive. For example, Silicon Valley reports that more than two-thirds of its computer programmers are foreign-born. (Population and economic data cited in the following section are for **2023**.)

- México has a population about 38% of that of the U.S., but they had a trade surplus* with us of about $152.4 billion.
- Japan has a population about 37% of that of the U.S., but they had a trade surplus with us of $71.2 billion.
- Taiwan has a population about 7% of that of the U.S., but they had a trade surplus with us of $48.0 billion.
- South Korea has a population about 15% of that of the U.S., but they had a trade surplus with us of $27.7 billion.
- Vietnam has a population about 30% of that of the U.S., but they had a trade surplus with us of $51.4 billion.

- Germany has a population about 25% of that of the U.S., but they had a trade surplus with us of $83.0 billion.

*A “trade surplus” for our economic competitors, e.g., México, means that they sold more to us than we sold to them.

## Taiwan: 1/3 of one percent of the world’s population produces over 60% of the world's semiconductors.

Taiwan warrants special mention. Taiwan’s population of 23.4 million (2023) is about one-third of one percent of the world’s population of 8.045 billion (8,045,311,447). Yet Taiwan is the epicenter of global semiconductor manufacturing, **producing over 60% of the world's semiconductors.**

### Taiwan develops its own “smart workers.

Taiwan does not depend on importing “smart people”; rather it develops its own “smart workers.” Taiwan is markedly less diverse than the United States: 95% to 97% of Taiwan's population are Han Chinese.

### The Biden administration paid Taiwan to show us how to do it.

Taiwan is so advanced in semiconductor manufacturing compared to the United States that “The Biden administration proposed awarding up to $6.6 billion in grants to Taiwan Semiconductor Manufacturing Co., the leading maker of the most advanced microchips, in a bid to bring some of the most cutting-edge semiconductor technology to the United States.”

(by Madeline Ngo and Don Clark of *The New York Times*, “Taiwan firm to get $6.6B to boost U.S. chip manufacturing” which appeared in the *East Bay Times* of April 9, 2024, pp. C7-C8)

## We were winners in 1960 with a population of 179.3 million.

The United States has been running a large deficit in international trade every consecutive year since 1976, so it is easy for younger people to **not** know that the U.S once ran a surplus, that is, we used to be the winners in international trade competition, selling more to our trading partners than we bought from them. However, the United States first had trade deficits in 1971, 1972, and 1974, and then every year since 1976. We are now chronic losers in international trade competition, buying more from other countries more than we sell to them.

## 161.8 million more Americans not helping us to be more competitive.

Apparently, 161.8 million more Americans (341.4 million in 2024 minus 179.3 million in 1960) did not help the United States to become more competitive in international trade in 2024 than we were in 1960. In 1960 with 179.3 Americans (161.8 million fewer than in 2024), not only were we more competitive in international trade (with a trade **surplus** of $3.5 billion), **but we also had more space available for non-human species, such as "an essentially worthless fish called a smelt," the California mountain lion, the California gray wolf, and the California Chinook salmon to coexist with us (more on this below).**

**And with 161.8 million fewer Americans in 1960 than in 2024, we were much less a contributor to global warming and to wildfires in Los Angeles than we are today.**

## Do any of our elected or appointed representatives comprehend that Planet Earth is finite and has limits?

The following two researchers of sustainable population levels think **not**.

### Capable of making the connection or "beyond the reach"?

Some analysts of sustainable population levels believe that our leaders are **not capable** of making the connection between human population growth and global warming. In a November 2023 NPG Forum Paper entitled "SPOILER ALERT: 'SMART GROWTH' WON'T SAVE THE DAY" (see link below), Mark Cromer writes that "to have a meaningful national dialogue" about population levels and "population growth simply appears beyond the reach of our present political leadership in the United States." (p. 2)
https://npg.org/library/forum-series/spoiler-alert-smart-growth-wont-save-the-day-fp2023.html

### Every government wants to grow its population (so we can wreck our planet even sooner).

Excerpt from an NPG Forum Paper, by Nathanial Gronewold entitled "Disease Pandemics and the Population Factor," August 2024.

The current thinking within the governments of every country on Earth is that **there is no such thing as too many people.**

Every government, including ours, wants to expand the size of the population under its control. They fret about falling birth rates and react to these statistics with public pleas and incentives designed to encourage the citizenry to produce far more humans and help expand the population. They encourage mass immigration as a convenient and easy way to expand tax rolls and economic growth (paying absolutely no attention to the rising rents and cost-of-living increases that the present population suffers as consequences).

In the past, some governments voiced concerns that their populations were way too large or expanding too rapidly, but those days are long gone. Government leaders today sing about how 8 billion people on our planet is not nearly enough, and wouldn't it be nice if we could go far beyond this figure. The media parrots them, quoting so-called "experts" like Elon Musk and Jeff Bezos and other sources carefully selected to back up their arguments on how falling birth rates are a significant threat while an expanding human population is anything but.

I occasionally hear a peculiar argument from some people advocating for much higher fertility rates and an ever-larger and expanding human population, to 10 billion, 15 billion, 20 billion, the more the merrier, as they say. This odd line of reasoning that I'm referring to goes something like this: "Think of all those billions of souls who will never be born, all those conscious beings who will never help us build a better world, should we fail to raise our birth rates. How unfair is it to them that we deny them this chance at existence?"

https://npg.org/library/forum-series/disease-pandemics-and-the-population-factor.html

## The HCD apparently does not comprehend that we live on a finite planet with limits. For the HCD, "There is no such thing as too many people."

The California Department of Housing and Community Development (**HCD**) is pushing for rapid housing growth to support population growth. Every 8 years, the HCD tells California cities and counties how much housing they must add during the next 8-year cycle (between 2023 and 2031):

- California must add more than 2.5 million new homes.
- Alameda County must add 441,000 new homes.
- Oakland must add 36,000 new homes.

**Is this rate of housing and population growth compatible with sustainable existence** in our state? This critical issue is **not** addressed by HCD planners. **Meanwhile, HCD pushes**

**full-speed ahead with tunnel vision for rapid housing growth in California, oblivious to sustainable population levels for California.**

**The HCD must accept solid evidence about our finite planet or refute it.**

As stated above, an abundance of solid research shows that the current world population of 8.2 billion is more than three times **its sustainable level of about 1.5 billion to 2.5 billion** and that the U.S. and California populations (about 341.4 million and 39.4 million in 2024, respectively) are **at least twice** their sustainable levels.

**Currently, the HCD just ignores these findings and proceeds full-speed ahead with growth as usual.** **This is wrong**. If they do not agree with these findings on the limits of our finite planet, the HCD should be **required to contest or refute them.** For example, HCD researchers could try to make a case that

- the sustainable population of California is 59 million
  (not 15.9 million as it was in 1960 nor 20.0 million as it was in 1970) and that

- the sustainable population of the United States is 500 million
  (not 179.3 million as it was in 1960 nor 203.4 million as it was in 1970)

## A Sustainable Existence Impact Analysis (SEIA) must be a requirement.

If the HCD could support such findings, it would justify their current tunnel-visioned push for rapid housing growth to support population growth. If, however, the HCD is unable or unwilling to show that the higher population levels they envision for California, e.g., 59 million, are compatible with sustainable (i.e., long-term) existence in our state, the HCD should be required to do a **Sustainable Existence Impact Analysis (SEIA)** to support its lofty goals for new housing growth in California.

## The HCD must be required to do a Sustainable Existence Impact Analysis (SEIA).

State agencies such as the HCD that tell California cities and counties how fast they must grow and private building and real estate interests that want to initiate major, new building projects should be required to do a **Sustainable Existence Impact Analysis (SEIA)**. The SEIA would be used to determine whether the proposed building project is compatible with sustainable existence in our state and on our planet.

Other impact analyses are already required for major, new building projects:

- **Environmental Impact assessment (EIA)** is required to assess the environmental consequences of a plan, policy, program, or actual projects prior to the decision to move forward with the proposed action.
- **Economic Impact Analysis (EIA)** is required to evaluate the impacts of a project, program, or policy on the economy of a specified region.
- **Socio-economic impact assessment (SEIA)** is required to understand the potential range of impacts of a proposed change and the likely responses of those impacted if the change occurs.

Correspondingly, a **Sustainable Existence Impact Analysis (SEIA)** should be required for

- state agencies such as the HCD that tell California cities and counties how fast they must add new housing units to accommodate population growth
- private building and real estate interests that want to initiate major, new building projects.

A **Sustainable Existence Impact Analysis (SEIA)** should not be diluted into a **Sustainability Impact Analysis (SIA)**. Businesses have adopted the word "sustainability" for a range of other purposes, for example, sustainable sales or sustainable profits or "**sustainable growth**."

## Species Preservation

A report entitled "Animals are disappearing, running out of places to live" appeared in the *New York Times* on December 16, 2022.

"Wildlife is disappearing around the world in the oceans and on land. The main cause on land is perhaps the most straightforward. Humans are taking over too much of the planet, erasing what was there before."

"With our bottomless appetitive for unchecked and unequal economic growth, humanity has become a weapon of mass extinction," U.N. Secretary-General Antonio Guterres said in his opening remarks last week in Montreal.

We don't have to look much farther than our own backyard to appreciate what Guterres is saying.

## No more opossums but a whole lot more accessory dwelling units (ADUs)

There are loud and frequent calls to build much more housing in California to support a larger population. This essay raises the question of what **human** population levels and development levels are compatible with sustainable existence in our state. But what about the **non-human** occupants of our state?

Until a few years ago, I used to see **opossums** sitting on our back fence at night. They are interesting animals. I could walk right up to them, but they would just stay there on the fence. Opossums are adaptable animals and can co-exist with humans – up to a point. But even opossums need a certain amount of space.

There used to be some open space and bushes in the surrounding lots. But now we are being asked by growth advocates to add an accessory apartment or accessory dwelling unit (ADU), e.g., a granny flat, **wherever there is any open space**. The result will be that in cities there will be more humans (and more economic growth) and less or no wildlife like opossums.

I have not seen an **opossum** in our backyard for over four years. I was reminded of this by a short article that appeared in the March/April 2024 edition of Saturday Evening Post (p. 21) entitled “YOUR FRIENDLY NEIGHBORHOOD OPOSSUM” .

**YOUR FRIENDLY NEIGHBORHOOD OPOSSUM**

## Species Preservation and the existence value of non-human species

Our standard of living includes environmental amenities we choose such as open space for species preservation (biodiversity) and the preservation of wilderness; these environmental amenities add to our quality of life and happiness. Surveys* have consistently shown than humans place value on the existence of wildlife whether it is a species you are likely to see such as an **opossum** or a species you will almost certainly never see such as a Siberian tiger. But preserving these species in the wild **requires setting aside enough open space for them to exist.** And this open space won't be

available for humans to build houses on to accommodate our growing numbers (which are the main drivers of economic growth).

* Most of these surveys are based on a method called contingent valuation, a method used to put an economic value on environmental amenities (such as the preservation of the California Condor or the California mountain lion) for which there is not a marketplace.

**The California Delta Smelt (Hypomesus transpacificus)**

**“an essentially worthless fish”**

https://www.gettyimages.com/fotos/delta-smelt

## The California Delta Smelt (Hypomesus transpacificus)

## “an essentially worthless fish”

President Trump charged that fire-fighting efforts in Southern California in January 2025 were hampered by Governor Newsom’s decision to allocate California’s limited water to preserving the California smelt in the Northern California Delta rather than to send it to

Southern California where it would be available for fire-fighting. Trump said that "governor [Governor Gavin Newsom] wanted to protect **an essentially worthless fish called a smelt**," "but didn't care about the people of California." (January 9, 2025)

Trump added: "Now the ultimate price is being paid. I will demand that this incompetent governor allow beautiful, clean, fresh water to FLOW INTO CALIFORNIA! He is the blame for this. On top of it all, no water for fire hydrants, not firefighting planes."

**Facts First**: These Trump claims include exaggerations, inaccuracies, and an overarching false narrative. Most notably, experts on California water policy said Wednesday that there is no basis for linking the existence of the Southern California fires or challenges in the firefighting effort to the water that is kept in the north of the state to protect the smelt and other species and ecosystems. Southern California does not have a shortage of water for fighting the fires.
https://edition.cnn.com/2025/01/09/politics/fact-check-trump-california-wildfires-fema/index.html

Brent Haddad, an environmental studies professor at the University of California, Santa Cruz, said that Trump's comments were so "stupid" that they should be ignored rather than discussed in detail. "There is no connection between environmental protection in northern California and low-flow fire hydrants in Pacific Palisades."

**More Facts First**: About two weeks later, on January 24, 2025, President Trump again showed his lack of knowledge of environmental matters. He indicated he intends to seek to weaken protections for the Delta smelt, a finger-length species that has suffered major declines and is thought to be nearing extinction in the wild. "They talk about the Delta smelt," Trump said. "It doesn't have to be protected. The people of California have to be protected."

**Untrue statement:** "It [Delta smelt] doesn't have to be protected."

**The Facts:** The California Delta Smelt used to be so plentiful that they were caught and sold commercially. Fishing boats used to haul Delta smelt up by the ton to sell them in San Francisco markets. Now, perhaps a few dozen remain in the entire Delta. The Delta smelt could be declared extinct in this decade.

**Untrue statement:** "It [Delta smelt] doesn't have to be protected." The people of California have to be protected."

**The Facts:** It is humans, not other species, that have "become a weapon of mass extinction." Other species need to be protected from humans, not vice versa.

A report entitled "Animals are disappearing, running out of places to live" appeared in the *New York Times* on December 16, 2022.

"Wildlife is disappearing around the world in the oceans and on land. The main cause on land is perhaps the most straightforward. Humans are taking over too much of the planet, erasing what was there before."

"With our bottomless appetitive for unchecked and unequal economic growth, humanity has become a weapon of mass extinction," U.N. Secretary-General Antonio Guterres said in his opening remarks last week in Montreal.

## The Essence of the Fish-Human Conflict

To survive, the Delta smelt need a diversion of fresh water into the San Francisco Bay to maintain a fresh water-salt water mixing zone in Suisun Bay and need net seaward flows in the lower San Joaquin River during periods when their larvae are present. This is a **fish-human conflict**: humans want the fresh water the smelt need to survive so humans can grow their populations and economies.

## What is the California Delta Smelt?

The Delta Smelt is a small, slender fish found only in the San Francisco Estuary (Delta) of

California. It averages 3-5 inches in length, is a luminous silvery blue color, and smells like cucumbers. Adults feed on planktonic copepods, amphipods, and cladocerans (water fleas). Larvae feed on unicellular algae, small crustaceans, and planktonic animals.

## Does the California Delta Smelt have commercial value?

President Trump says that the California Delta smelt is "**an essentially worthless fish**." However, the California Delta Smelt used to be so plentiful that they were caught and sold commercially. Fishing boats used to haul Delta smelt up by the ton to sell them in San Francisco markets. Now, perhaps a few dozen remain in the entire Delta. The Delta smelt could be declared extinct in this decade.

## Does the California Delta Smelt make for good eating?

President Trump says that the California Delta smelt is "**an essentially worthless fish**." But gourmets disagree. In fact, California Delta Smelt make for good eating.

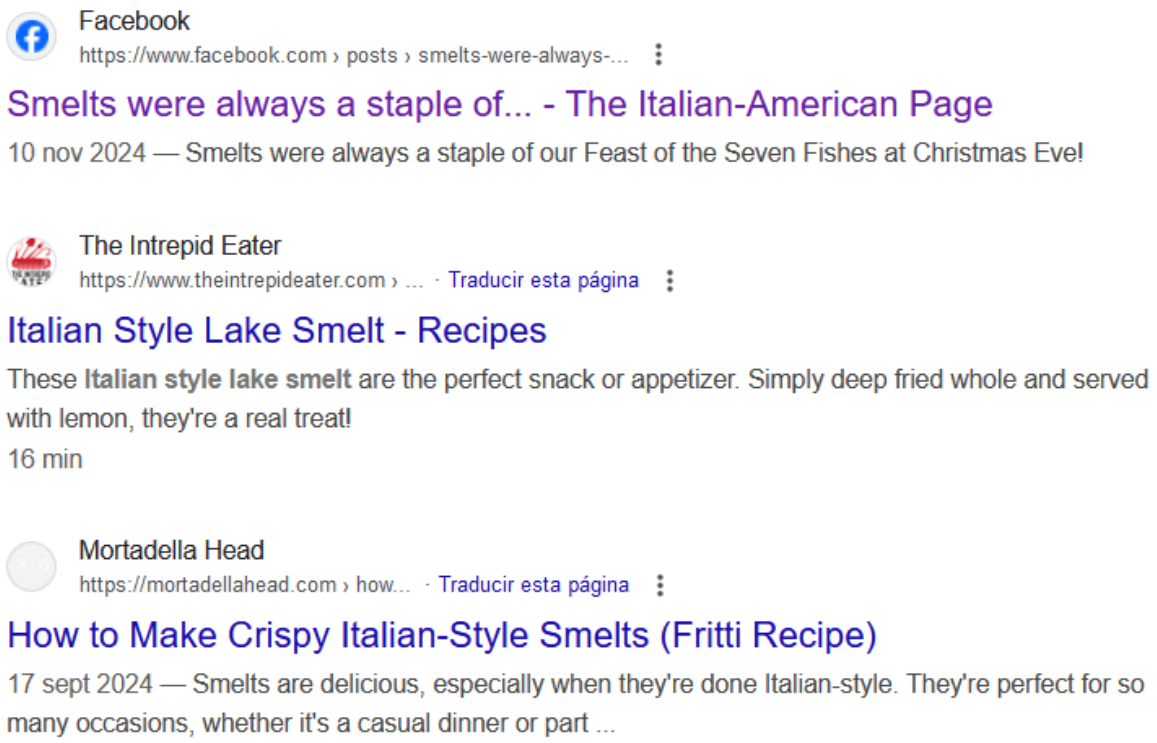
- "Smelt are ideal for eating that way. The bones are small and so soft after cooking that *each fish can be eaten whole*." (7 mar 2023) https://freshwater-reporter.com/smelt-great-to-eat-but-only-a-few/
- Seafood & Gourmet Products
  "Their color is olive to pale green with a broad silver strip on its side. Some smelt migrate to rivers from the sea for breeding, while others live entirely in freshwater. Smelt has an oily, mild taste and a soft texture. It has an odor and flavor like freshly cut cucumber."

## Italians disagree with President Trump about the value of smelt.

Why do Italians eat smelts?

"My guess is that smelts came to the table for two reasons: they resembled sardines which Italians knew well; and, more important, smelts were cheap. Dust smelts up with

a bit of flour or dredge them in bread crumbs or flour, fry them, drizzle them with a touch of lemon and they are the perfect finger food."




**Beyond commercial value, does the California Delta Smelt have existence value.**

**The existence value of non-human species:**

Our standard of living includes environmental amenities we choose such as open spaces and bodies of water (including rivers and creeks) for species preservation. We value these environmental amenities because they add to our quality of life and happiness. Surveys* have consistently shown that humans place value on the existence of non-human species such as mammals, birds, and fish, even if they are species you are unlikely to ever see in person such as a California Condor or the California mountain lion.

Note that the concept of existence value is distinct from the concept that non-human species have a right to exist. Existence value is **human-centric**. Does it make humans

happier just knowing that other species, e.g., the Siberian Tiger, still exist (even though it is very unlikely we will ever see one in person). That humans may be happier just knowing the Siberian Tiger exists does not imply that it has a right to exist in and of itself. The existence value (to humans) of a Siberian Tiger is a distinct concept from the concept that Siberian Tigers have a basic right to exist.

* Most of these surveys are based on a method called contingent valuation, a method used to put an economic value on environmental amenities (such as the preservation of the California Condor or the California mountain lion) for which there is not a marketplace.

## President Trump's Position on Existence Value?

President Trump has not indicated that he accepts the concept that non-human species have "**existence**" value, regardless of whether they are species that have (or had) **commercial** value to humans such as smelt (i.e., they made for good eating) or species with **no commercial** value to humans such as California Condor or the California mountain lion (which will be discussed in the next sections). Nor has President Trump indicated that he believes that non-human species have a basic right to exist, independent of their existence value to humans.

"**The humble Delta smelt urges Americans to fight for small fry**" by Joe Matthews

*East Bay Times*, February 20, 2025, p. A6

Joe Mathews writes the Connecting California column for Zócalo Public Square.

LITTLE FISH TALE

# *The humble Delta smelt urges Americans to fight for small fry*

**By Joe Mathews**

I'm just a little fish, not three inches long.

But my story speaks volumes.

Which is why America's biggest fish is gunning for me.

Donald Trump has taken more shots at me than at Vladimir Putin. He called me a "worthless fish" on Truth Social. And worst of all, he blamed me for January's Los Angeles fires.

He suggested I somehow stopped water imports to Southern California, keeping fire hydrants dry. The president also used me to justify his crazy decision to unleash two massive releases from two reservoirs, wasting water that farmers will need this summer. Luckily, no Californians were killed by this presidential-mandated flood — or those deaths would have been my fault too.

It hasn't mattered to Trump that I have one whale of an alibi when it comes to the L.A. fires:

I've never been to Los Angeles!

I'm a fish that can live only in the California Delta. So, rest assured, I couldn't have started the Palisades or Eaton fires — or killed the Black Dahlia. I'm one of those things you can only find in Northern California, like good sourdough.

For the record, I've never met Gov. Gavin Newsom, much less convinced him to keep more water in the Delta to protect me. The truth, if you still care about the truth, is that I'm so low on the food chain that Californians wrote me off long ago.

Let me take you to school. I used to be ubiquitous in my particular part of California. But by the mid-20th century, my numbers declined steeply. There were many culprits: disease, invasive species, and the greater pumping of Delta water to supply California cities and farms, which impacted the flows of the fresh, cold water that is my lifeblood. By 1993, I was labeled a "threatened" species, but conditions got worse. By 2009, I officially became endangered.

That designation sometimes inspires humans to action. The yellow-legged frog is making a comeback in the Sierra with human assistance. But I haven't enjoyed that kind of support. California's agricultural interests made me their bogey-fish, blaming me when the state government, in dry years, cut water imports from the Delta for farmers. Trump, parroting this pastoral propaganda, tried to kill me off during his first term, but was stopped by the courts.

The lies about my awfulness may continue well beyond my actual existence. Today, I'm extinct in the wild. And the delta smelt captive breeding program (it's even less sexy than it sounds), has struggled to produce more of me — and may soon be dead. The Trump administration just pulled federal funding, as retribution for my supposed plot to burn down L.A.

Here's another thing you should know. Scientists call me "an indicator species," meaning that my health is a good proxy for the health of the Delta ecosystem. I'm afraid that I also might be a proxy for the vulnerable in this new America.

These days, politicians say they are for the little fish, but when the water is fouled, they are quick to blame trans people, civil servants, children whose parents aren't citizens, and anyone else too small to fight back.

Scapegoating me, or any living thing, doesn't solve our real problems — it just spreads the cruelty in our ecosystems. "When we judge, we are always in a psychic space which is circular," warned the late French philosopher and Stanford professor Rene Girard.

Take it from me. This is a moment to stop blaming, and to start fighting as if your very existence were at stake.

I'd join you, but I lack the size to fight governments.

What's your excuse?

*Joe Mathews writes the Connecting California column for Zócalo Public Square.*

## A Win-Win-Win (Win$^3$) with a sustainable U.S. population

If the United States had a sustainable population of 179.3 million in 2024 as it had in 1960, it could be realizing a triple-win: **Win-Win-Win (Win$^3$)**.

The peak of the post-WWII "golden era" of manufacturing in the United States was the period from around 1950 to 1973, marked by high levels of industrial production and economic growth across Western Europe and the United States. The population of the United States in **1960** was **179.3 million** (179,323,175), a population within the range of sustainable population levels (150-200 million) recommended by NPG and other groups that research sustainable population levels. However, the U.S. population in **2024** was **341.1 million** (341,145,670), almost twice (1.90 times) our 1960 population, with 161.8 million more Americans, far exceeding the range of sustainable population levels. **But there is a taboo against discussions of sustainable population levels.**

- **Win 1: An economic win with a sustainable U.S. population**

  The United States in 1960 was a winner in international trade with a trade **surplus*** of $3.5 billion with a population of 179.3 million. In 2024, the U.S had a trade **deficit** of **$84.4 billion** with a population of 341.1 million, almost twice our 1960 population. Apparently, 161.8 million more Americans (341.1 million in 2024 minus 179.3 million in 1960) have not helped the United States become more competitive in international trade in 2024 than we were in 1960. **But there is a taboo against discussions of sustainable population levels.**

  * A trade deficit for the United States means that we buy more from our international trading partners than we sell to them. A trade surplus is the opposite.

- **Win 2: A <u>global warming win</u> with a sustainable U.S. population**

  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024, 161.8 million fewer Americans would have been emitting CO2 into the atmosphere which drives global warming and drove the **January 2025 wildfires in Los Angeles**. **<u>But there is a taboo against discussions of sustainable population levels.</u>**

- **Win 3: A <u>species preservation win</u> with a sustainable U.S. population**

  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024 with 161.8 million more Americans than in 1960, we would occupy less land and use fewer resources (e.g., water) and make it easier for other species to coexist with us such as the California Delta smelt, the California Condor, the California mountain lion, the California gray wolf, the California Chinook Salmon, and the California grizzly bear. **<u>But there is a taboo against discussions of sustainable population levels.</u>**

# Other “essentially worthless” Species?

President Trump charged that “governor [Governor Gavin Newsom] wanted to protect “**an essentially worthless fish called a smelt**,” “but didn’t care about the people of California.” (January 9, 2025). Newsom, says Trump, is allocating water to fish that he should be allocating to humans, especially in Southern California where the water could have been used to fight the January 2025 fires.

However, Trumps’s comment about the worthlessness of a fish (the Delta smelt) has implications for other threatened non-human species in California whose existence conflicts with the growth of human populations and economies. This section will focus on four of these species that are not (yet) extinct and on one species that is extinct and **that appears on the California state flag**.

1. the California Condor
2. the California Mountain Lion
3. the California Gray Wolf
4. The California Chinook Salmon
5. The California Grizzly Bear (extinct)

Although five species will be discussed, there are numerous other non-human species in California that are threatened or endangered. Please see end of this section.

# 1. The California Condor (Gymnogyps californianus)

## Does President Trump think that the California Condor is "an essentially worthless" bird?

The California Condor is a big bird with wingspans of nine feet, six inches and that weighs an average of 20 pounds. Down to a population of 27 in 1987, all wild remaining California condors were captured for a captive breeding program. The program worked well enough: biologists started releasing condors again in 1991; some of the birds released were hatched in captivity, while some had been born in the wild. There are now more than 400 living California condors, around 260 of them living in the wild.

<u>What would President Trump say about the worth of the California condor?</u>

President Trump says that the Delta Smelt is "**an essentially worthless fish**", but at least they make for good eating (Just ask the Italians) unlike the California condor. What would President Trump say about the **worth** of the California condor?

Can California Condors survive on their own living in the wild?

The captive breeding program for the California condo looks like a resounding success. But even the most ardent boosters of this program agree that the California condor will never be truly recovered until we can stop breeding the birds in captivity for release into the wild. If by some fluke the breeding program stopped today, it's unlikely there would be any condors in the wild in a few years.

Threats to the California Condor

Threats to the California Condor include habitat destruction, lead poisoning from ingesting spent ammunition, and being chewed up in wind-power turbines. Condors require vast territories for nesting and feeding. Regardless, the wind power industry has put up hundreds of large turbines at the east edge of the condors' expanding range in California.

Do California Condors Have **Commercia**l Value?

As discussed above, smelt have **commercial** value to humans (They make for great eating. Just ask the Italians), unlike California Condors which do not have commercial value. They are carrion-eaters and do **not** make for great eating. Nor do their bones nor feathers have value in commercial manufacturing processes.

The **Existence** Value of California Condors

Although California Condors do **not** have commercial value, they may have **existence** value. This means that humans, for example, you, derive happiness from just from knowing that California Condors continue to exist even though it is unlikely you will ever see one in person. Note that existence value is **human-centric**. The fact that humans derive happiness from knowing that California Condors continue to exist does not imply they have a basic right to exist.

## What is the cost of trying to preserve the California Condor?

**Direct Costs:** From 1982 through March 2022, **$60 million dollars** were spent to protect

and increase the number of condors, an endangered species. This includes the cost of the skilled personnel such as biologists that operate the California Condor captive breeding program.

**Indirect Costs:** the opportunity cost of land. Condors require vast territories for nesting and feeding. If this land were not set aside for condor preservation, it could be used for:

- agriculture
- wind-power turbines
- housing for our growing population.

## The Essence of the Condor-Human Conflict

To survive, California Condors require vast territories for nesting and feeding. But this is land humans could use to grow their populations and economies. Also, it is expensive for Californians to maintain the captive breeding program necessary for the condor's survival. This is money that could instead be spent to subsidize new housing to accommodate our growing human population, the main driver of economic growth in the United States. (Consumer spending makes up about 70% of the US economy.)

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## 2. The California Mountain Lion

### Does President Trump think that the California mountain lion is "an essentially worthless" animal?

Tawny, majestic and amazingly athletic, mountain lions (also called puma, panther, or cougar) are native to California and at home in our rural landscape, including parks. By nature, they're highly elusive, so lion sightings are extremely rare, even for parks' staff and wildlife experts.

What would President Trump say about the worth of the California mountain lion?

President Trump says that the Delta Smelt is "**an essentially worthless fish**", but at least they don't prey on our livestock, our pets, and occasionally us humans as do California mountain lions. Moreover, the California smelt makes for good eating (Just ask the

Italians) unlike the California mountain lion. What would President Trump say about the **worth** of the California mountain lion?

Some hunters say mountain lions are good to eat.

You would think that mountain lions are not good to eat. They are sinewy, muscled athletes, so you would think their meat would be tough. Not so says *Free Range American* podcast, hunter, biologist, and filmmaker Donnie Vincent:

Mountain Lion and Other 'Bad' Meat is Actually Delicious

January 06, 2021 *By David Maccar*

https://freerangeamerican.us/eat-mountain-lion/

In a recent talk on the *Free Range American* podcast, hunter, biologist, and filmmaker Donnie Vincent talked about a mountain lion he'd arrowed in British Columbia and how much everyone in camp had loved the meat from the big cat.

Regardless of how much Donnie Vincent and his hunting pals like mountain lion meat, Californians are not going to spend hundreds of millions to try to preserve California mountain lions so we can eat them. **California mountain lions do not have commercial value.** So, the motivation for preserving them is not their commercial value as a food source nor to use their fur, bones, or organs in commercial manufacturing process.

Mountain lions are not vital to maintain a "balanced ecosystem."

Some argue that mountain lions have (commercial) value because "they play an important role in keeping deer, rabbits, and other species populations in control, as part of a **balanced ecosystem**" * However, humans don't need mountain lions for this. We have shown that we are very capable of the selective killing of deer, rabbits, and other species to keep their populations in control without help from mountain lions. Humans have also shown we are quite capable of culling wildlife populations just by population growth and by occupying the habitat wildlife needs to survive.

* This is a teleological view of nature.

Do California Mountain Lions Have **Negative Commercia**l Value?

President Trump says that the Delta Smelt is "**an essentially worthless fish**", but at least they don't attack us and our animals. Nor do they cause motor vehicle accidents. This is not true of the California mountain lion: rather than adding commercial value, mountain lions **generate commercial costs**.

- **Losses of Human Life:** This is rare, but it does happen. Since 1890, fewer than 50 mountain lion attacks on humans have been reported in California, including six that have been fatal. (Sep 3, 2024)

- **Livestock Losses:** The mountain lion has long been considered a serious predator of domestic livestock, including sheep, goats, and lamb. This is a direct cost to ranchers. There is also the cost of building enclosures to try to keep domestic livestock safe from mountain lions. There is also the cost of responding to mountain lion attacks. "If a domestic animal is injured or killed by a mountain lion, the owner has the legal right in California to have the mountain lion killed. The owner can hire a hunter to kill the mountain lion within ten days, within a radius of ten miles from the incident." https://mountainlion.org/2020/12/02/defining-depredation-in-california/

- **Pet Losses:** Mountain lions are known for attacking pets. "If you live in California and are looking for a lost pet, there's a fair chance, unfortunately, that it was an easy meal for a lion. A new report by the California Department of Fish and Wildlife says that the stomach contents of 83 mountain lions were largely composed of cats, dogs, and other domesticated animals." https://www.fieldandstream.com/hunting/study-mountain-lions-are-eating-large-number-of-pets

When these attacks occur, pet owners call authorities who send skilled wildlife specialists to deal with the mountain lion(s) who attacked or killed the pets and who might still be in the neighborhood, e.g., under the steps. There is a cost to society to send these skilled personnel, e.g., higher taxes to pay for these services.

**What happens to California mountain lions who are found in residential neighborhoods?** "The majority are killed under depredation permits for attacking pets or livestock, but in recent years a growing number are also being killed just for wandering into developed areas and becoming inconveniences to responding authorities."
https://pcl.org/tipping-point-californias-mountain-lions/#:~:text=The%20majority%20are%20killed%20under,becoming%20inconveniences%20to%20responding%20authorities.

- **<u>Losses to Collisions with Mountain Lions:</u>**

  About 7,000 vehicle crashes a year on California highways involve large wildlife, such as California mountain lions (2018 data from the Road Ecology Center at the University of California, Davis). That's nearly 20 crashes a day, which is probably understated because many such crashes are not reported.

  These vehicle crashes aren't cheap — for the drivers or the government. Between 2015 and 2018, wildlife crashes have cost more than $1 billion. The expenses include car damage, personal injuries, emergency response, traffic impacts, lost work, and the clean-up.
  https://www.hcn.org/articles/california-budgets-61-million-for-wildlife-crossings/

## The **Existence** Value of California Mountain Lions

Although California mountain lions do **not** have commercial value, they may have **existence** value. This means that humans derive happiness from just from knowing that California mountain lions continue to exist even though most of us will never see one in person. Surveys continue to strongly show that Californians want the California mountain lion to survive and thrive – despite the costs they entail such as preying on livestock and pets and causing vehicle accidents. Remember the publicity and the strong public support that P-22* received. Ironically, the existence value of California mountain lions appears to be higher if you just envision them or see them on television rather than physically encountering them, for example, if they wander into your residential neighborhood.

(Recall from the previous section that existence value is a **human-centric** concept, and the fact that humans may derive pleasure just from knowing that mountain lions continue to exist in the wild does not imply that California mountain lions have a fundamental right to exist.)

* P-22, a mountain lion, made his home in Griffith Park in Southern California for a decade. He became a highly-publicized symbol for California's endangered mountain lions and their decreasing genetic diversity. Genetic analyses indicate that lions in the Santa Monica Mountains have the lowest levels of genetic diversity ever documented in the West. P-22 was trapped in Griffith Park and could not leave, limiting his range to a fraction of a normal mountain lion. He was captured on December 12, 2022 and then euthanized on December 17, 2022, after examinations revealed he was suffering from traumatic injuries consistent with being hit by a car, in combination with several longer-term health issues.

## What is the cost of trying to preserve the California Mountain Lion?

### Direct Costs of preserving the California mountain lion include

- collaring and tracking individual lions
- navigating the boundaries between ranchers and wildlife authorities
- banning the use of certain rodenticides
- acquiring land for preserves and conservation easements

These activities require educated and skilled personnel such as biologists, and this is a cost to society.

**Direct costs** of preserving the California mountain lion include also include the cost of trying

- to reduce vehicle collisions with mountain lions
- to minimize the fragmentation of critical mountain lion habitat

The previous section reported that about 7,000 vehicle crashes a year on California highways involve large wildlife, such as California mountain lions (2018 data from UC Davis). Highways aren't just crash sites for the mountain lions caught in the headlights; **they're also a great divide that can threaten the future of an entire species.** That's because highways cut through critical habitat, making it impossible for animals from one side to breed with animals on the other. This leads to inbreeding and deformities that result from dwindling genetic diversity.

## Wildlife crossings can help.

The Wallis Annenberg Wildlife Crossing (formerly Liberty Canyon Wildlife Crossing) is expected to be completed in 2026 to connect the Santa Monica Mountains and the Simi Hills. It will provide a safe and sustainable passage for mountain lions over Highway 101. This wildlife crossing will give threatened animals, including the California mountain lion, a path **over** a 10-lane freeway instead of **through** it, hopefully extending their lives and habitat.

It's a **$92 million** project — with $58 million from the state and the rest from philanthropy. The 210-foot crossing will span 10 lanes of the U.S.-101 Hollywood/Ventura Freeway and will be the first of its kind in California and the largest in the world when it is completed in 2026. This project is part of a larger nationwide push to build special bridges and tunnels that help animals safely cross busy roads and freeways. The goal is twofold: to give species at risk the space they need to find mates and to reduce the number of car crashes that imperil both wildlife and humans.

## Fires in Southern California in January 2025
## and their effects on California mountain lions

The **direct costs** of trying to preserve California mountain lions **will increase** because of the fires in Southern California in January 2025:

"California's mountain lion population devastated by Los Angeles fires"
Story by Evan Williams, January 19, 2025, Los Angeles, California.
Wildlife experts that specialize in mountain lions warn of the devastating impact ongoing fires in the Los Angeles area may have on local species. Mountain lions roam areas that have been completely destroyed by the wildfires, leaving many of these big cats without a home. Fires will further deteriorate mountain lions' ecosystems and lead to starvation among those who managed to survive the flames themselves.
When their territories are scorched, mountain lions are forced to venture into unfamiliar areas, increasing the chances of dangerous encounters with humans. It's estimated that up to 600 mountain lions have perished in past fires, a staggering number that threatens their population stability.

**Indirect Costs of preserving the California mountain lion include:**

**The opportunity cost of land:** California mountain lions need about 100 square miles of open, unfragmented territory. Mountain lions are solitary unless mating or parenting

and maintain territories that average 100 square miles in size. Lions mark their territories by clawing trees and urinating on scratch piles of dry leaves, grass, or pine needles. They will fight other lions, even to the death, to protect their territory.

If this land were not set aside for the preservation of the California mountain lion, it could be used for:

- agriculture, particularly livestock grazing
- housing for our growing population.

**The Essence of the California Mountain Lion-Human Conflict**

To survive, California mountain lions need large, unfragmented territories. But this is land humans could use to grow their populations and economies. Also, it is expensive for Californians to maintain the programs necessary to preserve California mountain lions. The money we spend for these programs – which require educated, experienced personnel, e.g., biologists – could instead be spent to subsidize new housing to accommodate our growing human population, the main driver of economic growth in the United States. (Consumer spending makes up about 70% of the US economy.) Moreover, mountain lions attack our livestock and pets and occasionally us humans; some humans believe that a pet or animal that bites the hand that feeds it – or the hand that spends to preserve it – should be exterminated.

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## 3. The California Gray Wolf (Canis lupus)

### Does President Trump think the California gray wolf is "an essentially worthless" animal?

**The Gray Wolf** (*Canis lupus*) is a magnificent species native to California which was hunted to extinction in California by the 1920s because their existence conflicted with the population and economic expansions of settlers in California, especially starting with the California Gold Rush in 1848. (Note: In addition to being an impediment to human population and economic expansions, wolves were hunted in California for sport – as they have been throughout the world for thousands of years.)

<u>What would President Trump say about the worth of the California gray wolf?</u>

President Trump says that the Delta Smelt is "**an essentially worthless fish**", but at least they don't prey on our livestock as do California gray wolves. Moreover, the California

smelt makes for good eating (Just ask the Italians) unlike the California gray wolf. What would President Trump say about the **worth** of the California gray wolf?

Historical range of California Gray Wolves

The historical range of the California gray wolf was the Sierra Nevada, southern Cascades, Modoc Plateau, Klamath Mountains and likely the North Coast Ranges, the Central Valley, the western slope of the Sierra Nevada foothills and mountains, and the Coastal Ranges until the early 1800s.

Once on the brink of extinction in California

Once on the brink of extinction in California, the gray wolf has shown signs of recovery due to protection under the California Endangered Species Act (CESA). Gray wolves first returned to California in late 2011 (following Oregon wolf OR-7).

Reports of the current California gray wolf population vary widely.

Data on counts of California gray wolf population are difficult to collect, and accurate data collection is hindered by staffing shortages (and insufficient funds to hire more staff) and not enough satellite-based GPS collars. One recent count showed seven wolf packs in the state with **39** individual wolves. However, other counts show fewer or more.

Reports that California gray wolf population is less than a dozen.

There have been human-gray wolf conflicts in Northern California: e.g., ranchers claim that wolves from the seven-member Shasta Pack ate a calf last year. The whereabouts of this pack is currently unknown, and there are reports that California's wolf population now numbers **less than a dozen**. (Note: It is estimated that Northern California has 23,000 square miles (60,000 $km^2$) of potential wolf habitat that could support **more than five hundred wolves**.)

Report that California gray wolf population is at least 70.

“Two new wolf packs confirmed in California amid population boom”

By Lila Seidman, Staff Writer, Nov. 30, 2024 3 AM PT

https://www.latimes.com/environment/story/2024-11-30/two-new-wolf-packs-confirmed-in-california-population-increase

“It’s now estimated that at least 70 wolves are roaming the Golden State, a marked increase from last year.

“The first wolf to be spotted in California since the apex predators were extirpated in the 1920s arrived 13 years ago.

“Wolves are continuing to make a California comeback.

“State wildlife officials have confirmed the presence of two new gray wolf packs in Northern California, and estimate there are now at least 70 of the endangered apex predators roaming the state — up from 44 documented last year.

“The freshly minted Diamond pack is roaming terrain about 50 miles north of Lake Tahoe, while the other new pack — as yet unnamed — is ranging just south of Lassen Volcanic National Park, according to Axel Hunnicutt, state gray wolf coordinator for the California Department of Fish and Wildlife (CDFW).

“Four years ago, there was just one pack. Now there are nine, according to a map released by CDFW this month. And with 30 pups born this year, more are expected to form.”

Physical Attributes of California Gray Wolves

Gray wolves are canines with long bushy tails that are often black-tipped and hang down or straight, but never curled. Their coat color is typically a mix of gray and brown with

buffy facial markings and undersides, but the color can vary from solid white to brown or black. **Gray wolves look somewhat like a large German shepherd.** The average size of a wolf's body is three to five feet long, and their tails are usually one to two feet long. Females typically weigh 60 to 100 pounds, and males weigh 70 to 145 pounds.

What do California Gray Wolves eat?

Gray wolves are carnivores. They eat small mammals, birds, and reptiles and scavenge carrion. If hungry enough, they'll hunt larger animals like elk and deer and may prey on large livestock.

Do California Gray Wolves Have **Commercia**l Value?

Although President Trump says that smelt are "**an essentially worthless fish**," smelt do, in fact, have **commercial** value to humans: They make for great eating. Just ask the Italians. In contrast, California gray wolfs are **not** known to make for great eating.

Some hunters say gray wolves are good to eat.

You would think that than wolves which have powerful muscles, large canine teeth, powerful jaws, and the ability to pursue prey at 60 km (37 miles) per hour would not make for great eating, but some hunters disagree. There are scattered reports from hunters on Quora and Reddit saying that wolf meat is edible.

**Quora:** The only difference is that the wolf meat is very salty and soft. I love wolf meat. I have eaten it several times.

**Reddit:** Wolf meat is actually as good as venison and other game meat. I wonder why the hell do hunters seem to only eat meat from herbivorous animals. I know, carnivores often harbor parasites from their prey. But this can be solved by cooking the flesh thoroughly.

**Reddit:** There's nothing wrong with eating flesh from carnivorous predators. Crocodiles, alligators, bears, snakes, coyotes, mountain lions are often being hunt for their meat,

right? Wolves feed on deer, bison, and other prey animals. So, wolf meat might taste like them.

**Reddit:** Wolf meat probably tastes like dog meat. Hunting just for trophies or pelts is wasteful and whatever is killed should be eaten.

Regardless of what these hunters say, Californians are not going to spend tens of millions of dollars trying to preserve California gray wolves so we can eat them, especially given that their current population is approximately between 12 and 70. **More importantly**, these hunters apparently killed wolves **somewhere else than in most states in the United States, including California, where the killing of gray wolves is banned:**

"The 'take' of a gray wolf is prohibited anywhere in the state, including to hunt, pursue, harass, catch, capture, or kill. There is no hunting season for wolves in California." https://wildlife.ca.gov/Conservation/Mammals/Gray-Wolf#:~:text=The%20%22take%22%20of%20a%20gray,season%20for%20wolves%20in%20California.

**California gray wolves do <u>not</u> have commercial value.** So, the motivation for preserving them is not their commercial value as a food source nor to use their fur, bones, or organs in commercial manufacturing process.

<u>California gray wolves are not vital to maintain a "balanced ecosystem."</u>

Some argue that California gray wolves have (commercial) value because they play an important role in maintaining a balanced ecosystem. * For example: "the presence of wolves in the state affects other flora and fauna as well. The population of deer is managed, which in turn protects vegetation for songbirds and beavers." (* This is a teleological view of nature.)

However, humans don't need California gray wolves for this. We have shown that we are very capable of the selective killing of deer, elk, and other species to keep their populations in control without help from California gray wolves. Humans have also shown we are quite capable of culling wildlife populations just by population growth and by occupying the habitat wildlife needs to survive. Moreover, black-tailed deer populations in California have been declining for decades, and elk populations are virtually non-existent. This has occurred without help from the California gray wolf.

## Do California Gray Wolves Have **Negative Commercia**l Value?

President Trump says that the Delta Smelt is "**an essentially worthless fish**", but at least they don't attack our animals and possibly us. This is not true of the California gray wolf: rather than adding commercial value, gray wolves **generate commercial costs**. The following section covers four **direct** classes of commercial costs and two **indirect** classes of commercial costs for a **total of six** classes of commercial costs generated by California gray wolves.

**Direct Costs of Coexisting with California gray wolves**

1. Losses of Human Life/Threats to Human Safety
2. Livestock losses
3. Pet losses
4. Cost of tracking the California Gray Wolf

**Indirect Costs of Coexisting with California gray wolves**

5. Negative effects on livestock.
6. Compensation for negative effects on ranchers.

## Direct Costs of Coexisting with California gray wolves

### 1. Losses of Human Life and Threats to Human Safety: Negligible

Wolves rarely pose a direct threat to human safety. Wild wolves generally fear and avoid people. In the past 40 years, 18 reports of wolf aggression toward humans have been reported. Eleven of those reports involved wolves habituated to humans and six involved domestic dogs.

### 2. Livestock Losses

When elk and deer are not available, gray wolves prey on livestock. Wolves have been documented to consume prey in accordance with prey species abundance. As noted

above, black-tailed deer populations in California have been declining for decades, and elk populations are virtually non-existent. Accordingly, research by the California Department of Fish and Wildlife (CDFW) on the Lassen wolf pack documents that cattle account for 59% of the wolf pack's diet in the summer months when cattle grazing and wolf home ranges overlap.

In 2023, there were 73 reports of wolf-livestock depredations in California, according to Hunnicutt, 38 of which were "confirmed or probable wolf" attacks." https://www.redding.com/story/news/2024/12/05/gray-wolf-pack-found-in-shasta-as-population-grows-in-california/76714171007/

There are **not** depredation permits for wolves.

Unlike for mountain lions, there are not depredation permits for California gray wolves.

California mountain lions: "If a domestic animal is injured or killed by a mountain lion, the owner has the legal right in California to have the mountain lion killed. The owner can hire a hunter to kill the mountain lion within ten days, within a radius of ten miles from the incident."
https://mountainlion.org/2020/12/02/defining-depredation-in-california/

California gray wolves: **No such legal rights exist** for ranchers whose livestock is "injured or killed" by a California gray wolf. "The 'take' of a gray wolf is prohibited anywhere in the state, including to hunt, pursue, harass, catch, capture, or kill. There is no hunting season for wolves in California."
https://wildlife.ca.gov/Conservation/Mammals/Gray-Wolf#:~:text=The%20%22take%22%20of%20a%20gray,season%20for%20wolves%20in%20California.

Following a February 10, 2022, court order, gray wolves in the contiguous 48 states and Mexico – with the exception of the Northern Rocky Mountain population – are now protected under the Endangered Species Act (ESA) as threatened in Minnesota and endangered in the remaining states.

**3. Pet Losses:** California gray wolves can attack pets. In addition to livestock depredation, wolves sometimes kill and injure domestic pets and livestock guarding animals, such as livestock protection dogs and donkeys. However, because California gray wolves mainly occupy sparsely-populated forests in Northern California, they are less likely to wander into residential neighborhoods and have interactions with humans and their pets as do California mountain lions in Southern California where residential development has extended into the historic range of mountain lions.

A recent report (December 2024) says that wolves have not been attacking pets: "Contrary to social media chatter, 'there have not been any confirmed cases of wolves attacking pets in California,'" Hunnicutt said. (Dec 5, 2024) https://www.redding.com/story/news/2024/12/05/gray-wolf-pack-found-in-shasta-as-population-grows-in-california/76714171007/

**4. Cost of Tracking the California Gray Wolf**

In order to track the population of California gray wolves and to be able to alert local ranchers when wolves are in their area, the California Department of Fish and Wildlife (CDFW) seeks to outfit at least one animal per pack with satellite-based GPS collars. This is an expensive process, requiring educated and experienced personnel, e.g., biologists. At this time, only four wolves have been outfitted with satellite-based GPS collars by CDFW.

## Indirect Costs of Coexisting with California gray wolves

### 5. Negative Effects on Livestock

**Indirect costs** of wolf presence can be 7.5 times larger than direct mortality costs. Direct mortality or injury is **only one aspect** of the wolf-cattle conflict. Research in animal biology confirms that the presence of predators on the landscape creates long term stress in animals, which is manifested biologically via elevated cortisol levels. Cows with elevated cortisol levels have been shown to have impaired immune system response, compromised metabolic function, and reduced reproductive success. Calves and yearling cattle, who will later be slaughtered and enter the beef supply chain, may produce lower-quality carcasses if wolf-related stress persists in muscle tissue as they age.

Data from Montana on the indirect cost of wolf presence.

In parts of the United States where wolf-livestock conflict has a longer history (e.g., Montana), research documents that **the indirect costs of wolf presence are far more substantial than the direct mortality costs**. For example, a study that considered the impact of wolf presence solely on calf weight gain found that the indirect cost of wolf presence was **7.5 times larger** than the direct mortality cost.

### 6. Cost of Compensating Ranchers for Livestock Losses Attributable to Wolves

California created a **$3 million fund** in 2021 to compensate ranchers for the effects of wolves. The money was paid out to the ranchers for killed livestock, for mechanisms to protect livestock, and for the stress on cattle caused by wolves. In 2024, the funds were completely distributed after which the state budgeted a **new $600,000** for the fund.

## The Existence Value of California Gray Wolves

Although California gray wolves do **not** have commercial value, they may have **existence*** value. This means that humans derive happiness from just from knowing that California gray wolves continue to exist even though most of us will never see one in person. Surveys continue to show that Californians want the California gray wolf to survive and thrive – despite the costs they entail such as preying on livestock.

Remember the publicity and avid public interest the gray wolf OR-93 received. The following section is based on a December 5, 2021 article by Katharine Gammon of *The Guardian*.

The young gray wolf, dubbed OR-93, who took experts and enthusiasts on a thousand-mile journey across California, died last month, ending a trek that thrilled and inspired us. The travels of the young male gray wolf through the state were a rare occurrence: he was the first wolf from Oregon's White River pack to come to California and possibly the first gray wolf in nearly a century to be spotted so far south (Ventura County).

When he was just 14 months old and not yet fully mature, he took off on his long journey to find a mate. OR-93 first entered California on the last day of January 2020 and looked for a mate in Northern California. He then zagged back to Oregon, but returned once more to California at the end of February.

He moved remarkably fast, padding around 16 counties between the first week in February and the end of March. He traveled more than 935 air miles (straight miles on a map), over three months in search of a mate and territory.

After reaching Yosemite national park (see photo below), OR-93 made a remarkable decision: he made a hard turn west and crossed the Central Valley of California – which means he somehow crossed three of the state's busiest roads – Highway 99, Interstate 5 and Highway 101. OR-93 then was spotted as far south as Ventura County. He died after

being struck by a vehicle along Interstate 5 in Kern County. (Nov 24, 2021) (Kern County is over 140 miles north of Ventura County where OR-93 had been.)

November and December is the time when wolves are looking most aggressively for a mate – they prefer to be coupled up before mating season comes in February. Maybe OR-93, alone in California, realized he couldn't find the mate he was seeking in California after searching for her as far south as Ventura County and decided to head back home to Oregon to look for her but was killed in route.

The gray wolf OR-93, near Yosemite, California, shared by the state's Department of Fish and Wildlife. Photograph: AP

(* Recall from the previous sections that existence value is a **human-centric** concept, and the fact that humans may derive pleasure just from knowing that gray wolves continue to exist in the wild does not imply that California gray wolves have a fundamental right to exist.)

**The Essence of the California Gray Wolf-Human Conflict**

To survive, California gray wolves need large, unfragmented territories. But this is land humans could use to grow their populations and economies. Also, it is expensive for Californians to maintain the programs necessary to preserve California gray wolves. The money we spend for these programs – which require educated, experienced personnel, e.g., biologists – could instead be spent to subsidize new housing to accommodate our growing human population, the main driver of economic growth in the United States. (Consumer spending makes up about 70% of the US economy.) Moreover, California gray wolves attack our livestock and occasionally our pets.

## A Win-Win-Win (Win$^3$) with a sustainable U.S. population

If the United States had a sustainable population of 179.3 million in 2024 as it had in 1960, it could be realizing a triple-win: **Win-Win-Win (Win$^3$)**.

The peak of the post-WWII "golden era" of manufacturing in the United States was the period from around 1950 to 1973, marked by high levels of industrial production and economic growth across Western Europe and the United States. The population of the United States in **1960** was **179.3 million** (179,323,175), a population within the range of sustainable population levels (150-200 million) recommended by NPG and other groups that research sustainable population levels. However, the U.S. population in **2024** was **341.1 million** (341,145,670), almost twice (1.90 times) our 1960 population, with 161.8 million more Americans, far exceeding the range of sustainable population levels. **But there is a taboo against discussions of sustainable population levels.**

- **Win 1: An economic win with a sustainable U.S. population**

  The United States in 1960 was a winner in international trade with a trade

**surplus*** of $3.5 billion with a population of 179.3 million. In 2024, the U.S had a trade **deficit** of **$84.4 billion** with a population of 341.1 million, almost twice our 1960 population. Apparently, 161.8 million more Americans (341.1 million in 2024 minus 179.3 million in 1960) have not helped the United States become more competitive in international trade in 2024 than we were in 1960. **But there is a taboo against discussions of sustainable population levels.**

* A trade deficit for the United States means that we buy more from our international trading partners than we sell to them. A trade surplus is the opposite.

- **Win 2: A global warming win with a sustainable U.S. population**

  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024, 161.8 million fewer Americans would have been emitting CO2 into the atmosphere which drives global warming and drove the **January 2025 wildfires in Los Angeles**. **But there is a taboo against discussions of sustainable population levels.**

- **Win 3: A species preservation win with a sustainable U.S. population**

  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024 with 161.8 million more Americans than in 1960, we would occupy less land and use fewer resources (e.g., water) and make it easier for other species to coexist with us such as the California Delta smelt, the California Condor, the California mountain lion, the California gray wolf, the California Chinook Salmon, and the California grizzly bear. **But there is a taboo against discussions of sustainable population levels.**

## 4. The California Chinook Salmon (Oncorhynchus tshawytscha)

### Does President Trump think that the California Chinook salmon is "an essentially worthless" fish?

There are four types of salmon in California:

- Chinook salmon.
- coho salmon.
- chum salmon.
- pink salmon.

The populations of chum salmon and of pink salmon are small to non-detectable, and there is concern that these species may become extinct in just a few years. The populations of Chinook salmon and coho salmon are more substantial, but both are **threatened species** under the Endangered Species Act.

<u>Coho salmon</u>

There are now probably less than 5,000 native coho salmon (with no known hatchery

ancestry) spawning in California each year, many of them in populations of less than 100 individuals.

Chinook salmon

Populations of California Chinook salmon are significantly larger than those of coho salmon, so **this section will focus on the California Chinook salmon.** However, it is threatened by warming temperatures and changing conditions in freshwater and ocean habitats. In 2022, officials counted just 69,000 adult fall-run Chinook in the entire Sacramento Valley, with a moderate improvement last year. Abundance numbers for all runs have been below their respective long-term averages in at least 10 of the last 15 years. The chart below gives historical data.

**Estimates of Returning Central Valley Fall-run Chinook Salmon**
***Historical Through 2017***

| Year | Number of Salmon | Year | Number of Salmon |
|---|---|---|---|
| Historic | 1,000,000 | 1987 | 297,000 |
| 1954 | 487,000 | 1990 | 87,000 |
| 1957 | 118,000 | 1993 | 165,000 |
| 1960 | 476,000 | 1996 | 351,000 |
| 1963 | 294,000 | 1999 | 414,000 |
| 1966 | 195,000 | 2002 | 872,000 |
| 1969 | 320,000 | 2005 | 437,000 |
| 1972 | 153,000 | 2008 | 71,000 |
| 1975 | 195,000 | 2011 | 227,000 |
| 1978 | 156,000 | 2014 | 255,000 |
| 1981 | 260,000 | 2017 | 100,000 |
| 1984 | 262,000 | | |

Source: California Department of Fish and Wildlife

What would President Trump say about
the worth of the California Chinook salmon?

President Trump says that the Delta Smelt is "**an essentially worthless fish**". But as has been shown, the California smelt does, in fact, have worth: it makes for good eating (Just ask the Italians). The smelt's bones are small and so soft after cooking that *each fish can be eaten whole*." (7 mar 2023).

The California Chinook salmon also makes for good eating, but unlike smelt, salmon have abundant bones you must learn how to deal with. The Internet (Utube, etc.) offers lots of hints and suggestions about how to accomplish this.

President Trump's negative view of the California Delta smelt

President Trump's has a negative view of California Delta smelt because fresh water is being diverted to the San Francisco Bay to maintain a fresh water-salt water mixing zone in Suisun Bay so the smelt can survive. This is water, Trump says, that should be used for humans to fight fires in Southern California and to grow human populations and economies rather than to preserve "**an essentially worthless fish**."

Does President Trump have an even more negative view
of the California Chinook salmon?

California Chinook salmon, an anadromous" fish, need **a whole lot more** fresh water than smelt do. To spawn, they migrate hundreds of miles from the ocean to the upper mainstem Sacramento River, their natal river. To make this possible, the river must be free of barriers like dams and have stable flows with ample cool clean water with enough oxygen. Also, the river must provide streamside vegetation and clean, loose gravel to protect salmon eggs from predators and to allow water to flow through the eggs for oxygen.

The survival of the California Chinook salmon (and the coho salmon) entail **more restrictions** on the growth of human populations and economies than does the survival

of California Delta smelt. **So, it is likely that President Trump thinks the California Chinook salmon has even less worth than the "essentially worthless" Delta smelt.**

History of the California Chinook salmon

Before European settlers showed up in California, there were four separate "runs" of Chinook salmon that would head into the Sacramento River watershed to spawn. Due to California's location on the southern edge of Chinook habitat, the seasons here were mild enough to allow one of those runs to enter the Sacramento from the ocean in December and January.

The only winter run of Chinook salmon in the world

In the winter run of Chinook, **the only one in the world**, the salmon swam up into the upper Sacramento and its tributaries, the Pit and McCloud rivers, to spawn. They were abundant enough there to provide a very good living for local Native people, including the Winnemem Wintu along the McCloud River.

**That all changed when the Shasta Dam was built in the 1940s**, blocking access to many miles of spawning habitat for the winter-run Chinook and other salmon. Winter-run Chinook lost more than 95 percent of their historic spawning habitat, a loss made worse when the run's last remaining stretch of free-flowing stream, at Battle Creek, was converted for hydroelectric generation.

Almost all populations of winter-run Chinook died out because of destruction of their habitat by humans, with the remaining few entirely dependent on deliberate releases of cold water from Shasta and Keswick dams. More prolonged drought or a deliberate shift in water management policy to benefit irrigators at the expense of wildlife could kill off what's left of the winter-run Chinook in just a few years.

Commercial and recreational salmon fishing banned

Numbers of spawning adult Chinook have dropped so low that all commercial and

recreational salmon fishing has been **banned for two years in a row**, and preliminary numbers this year show no signs of recovery." **It is noteworthy** that although California Chinook salmon have sport-fishing value, **this value is now effectively zero** since the low populations of California Chinook salmon can no longer support sport fishing nor commercial fishing. Nor does it appear that humans are willing to accept slower or negative growth of their populations and economies so that California Chinook salmon can recover sufficiently to again support commercial and sport fishing.

**What irks President Trump**

"The Newsom administration is refining a contentious set of proposed rules, years in the making, that would reshape how farms and cities draw water from the Central Valley's Delta and its rivers. Backed by more than $1 billion in state funds, the rules, if adopted, would require water users to help restore rivers and rebuild depleted Chinook salmon runs."

https://calmatters.org/environment/water/2024/12/california-new-delta-water-plan-salmon/

Increasing Chinook salmon runs by a factor of ten

"A longstanding mandate requires fishery and water managers to double the Central Valley's population of naturally reproducing Chinook salmon from levels observed between 1967 and 1991. This would translate into an average of 990,000 spawning Chinook each year, almost 10 times recent averages."

**This will irk President Trump.**

President Trump, a "common sense" business person, is irked because he believes that Governor Newsom cares more about fish, e.g., the Delta smelt, than humans. But the above proposed plan to increase the population of California Chinook salmon by a factor of ten will irk him even more. This is water, he will say, that humans need to grow their populations and their economies**, particularly agriculture in California's Central Valley**.

## The Existence Value of California Chinook salmon

Unlike the California Condor, the California mountain lion, and the California gray wolve, the California Chinook salmon used to have significant commercial value as a delicious food source provided by commercial fishing and as source of recreation, sport fishing, that also provided delicious food. However, **their commercial value is now effectively zero** since the low populations of California Chinook salmon can no longer support sport fishing nor commercial fishing. And the economic costs of restoring Chinook salmon runs to what they were, for example, 100 years ago now exceeds what society is willing or able to pay for this.

### Existence Value

Although California Chinook salmon may no longer effectively have commercial value, they may have **existence*** value. This means that humans derive happiness from just from knowing that California salmon continue to exist even though few of us will ever see them in person.

### The noble, heroic final journey of California Chinook salmon

The discussion of existence value in the previous sections included reports of the major publicity and strong public interest and support for the Southern California mountain lion P-22 and for the young gray wolve dubbed OR-93 who took experts and enthusiasts on a thousand-mile journey across California as he searched for a mate. OR-93's remarkable trek moved us and inspired us, but the noble, heroic final journey of the California Chinook salmon as they swim upstream for hundreds of miles to spawn in their natal streams **for one time only** is every bit as moving if not more so.

### The Life Cycle of the California Chinook salmon

The life span of Chinook salmon may range from two to seven years, but is generally two to four years for Central Valley salmon. Chinook salmon reside most of their life in the

ocean (e.g., one and a half to five years) where they rear before maturing and returning to their natal streams to spawn.

Obstacles California Chinook salmon encounter
as they return to their natal river to spawn:

- Powerful river currents: They must swim against strong currents.
- Dams: Dams disrupt natural river flow and create barriers that salmon must overcome.
- Habitat degradation
- Hydropower operations
- Waterfalls and rapids: These require salmon to jump or swim against strong currents.
- Predation

How do Chinook salmon know how to return to their natal streams to spawn?
Salmon return to their natal streams to spawn by using a combination of magnetic cues, celestial orientation, memory of their home stream's unique smell, and a circadian calendar. They navigate by using the earth's magnetic field like a compass.

**The End of the Journey: A Fleeting Romance and Ultimately Death**

Each year mature salmon make the long journey back to their natal river to reproduce, **just once**. For the five species of Pacific salmon (Chinook, chum, coho, pink, and sockeye), this arduous journey is a race against the clock that ends in a fleeting romance and ultimately death. (Nov 21, 2013).

**The Essence of the California Chinook Salmon-Human Conflict**

California Chinook salmon require a lot of fresh water. To spawn, they migrate hundreds of miles from the ocean to the upper mainstem Sacramento River, their natal river. To make this possible, the river must be free of barriers like dams and have stable flows

with ample cool clean water with enough oxygen. Also, the river must provide streamside vegetation and clean, loose gravel to protect salmon eggs from predators and to allow water to flow through the eggs for oxygen.

**But this is water and land that humans want to grow their populations and economies**, **particularly agriculture in the Central Valley**. Also, humans put dams on rivers to ensure their water supply and to generate hydroelectric power for their growing populations and economies. (Population growth is the main driver of economic growth in the United States. Consumer spending makes up about 70% of the US economy.)

What is the biggest threat to Pacific salmon and steelhead?

Habitat loss, both in quantity and quality, has been identified as one of the greatest risks to survival for Pacific salmon and steelhead populations. These species require water and land for their survival that humans want to grow our populations and economies.

## A Win-Win-Win (Win$^3$) with a sustainable U.S. population

If the United States had a sustainable population of 179.3 million in 2024 as it had in 1960, it could be realizing a triple-win: **Win-Win-Win (Win$^3$)**.

The peak of the post-WWII "golden era" of manufacturing in the United States was the period from around 1950 to 1973, marked by high levels of industrial production and economic growth across Western Europe and the United States. The population of the United States in **1960** was **179.3 million** (179,323,175), a population within the range of sustainable population levels (150-200 million) recommended by NPG and other groups that research sustainable population levels. However, the U.S. population in **2024** was **341.1 million** (341,145,670), almost twice (1.90 times) our 1960 population, with 161.8

million more Americans, far exceeding the range of sustainable population levels. **But there is a taboo against discussions of sustainable population levels.**

- **Win 1: An economic win with a sustainable U.S. population**

  The United States in 1960 was a winner in international trade with a trade **surplus*** of $3.5 billion with a population of 179.3 million. In 2024, the U.S had a trade **deficit** of **$84.4 billion** with a population of 341.1 million, almost twice our 1960 population. Apparently, 161.8 million more Americans (341.1 million in 2024 minus 179.3 million in 1960) have not helped the United States become more competitive in international trade in 2024 than we were in 1960. **But there is a taboo against discussions of sustainable population levels.**

  * A trade deficit for the United States means that we buy more from our international trading partners than we sell to them. A trade surplus is the opposite.

- **Win 2: A global warming win with a sustainable U.S. population**

  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024, 161.8 million fewer Americans would have been emitting CO2 into the atmosphere which drives global warming and drove the **January 2025 wildfires in Los Angeles**. **But there is a taboo against discussions of sustainable population levels.**

- **Win 3: A species preservation win with a sustainable U.S. population**

  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024 with 161.8 million more Americans

than in 1960, we would occupy less land and use fewer resources (e.g., water) and make it easier for other species to coexist with us such as the California Delta smelt, the California Condor, the California mountain lion, the California gray wolf, the California Chinook Salmon, and the California grizzly bear. **But there is a taboo against discussions of sustainable population levels.**

## 5. The California Grizzly Bear-extinct (Ursus arctos californicus)

### Does President Trump think that the California grizzly bear was "an essentially worthless" animal?

In the preceding sections, five animals that are **not** (yet) extinct were discussed

- two fish: the California Delta smelt and the California Chinook salmon
- two mammals: the California mountain lion and the California gray wolf
- a bird: the California condor.

In this section, an **extinct** animal, the California grizzly bear, will be discussed.

<u>The California grizzly bear: Native to California</u>

The California grizzly bear-extinct (Ursus arctos californicus) was native to California. It was a population of the North American brown bear. Its name "Grizzly" could have

meant "grizzled" – that is, with golden and grey tips of its hair. There were reports from the missions of Spanish California (Alta California, part of Nueva España) that grizzlies were of immense size. Measurements of museum specimens, however, show that this bear was no larger than those present in the rest of North America, with average body size estimates ranging from 104 kilograms (229 lb.) to 252 kilograms (556 lb.).

What did California grizzly bears eat?

The diet of the California grizzly bear was diverse, ranging from plant sources like grasses, seeds, berries, and acorns to animal sources such as elk, deer, salmon, steelhead, and carrion. Isotopic studies indicate that most of their diet consisted of plant matter, as with other grizzly bear populations.

What would President Trump have said about the worth of the California grizzly bear?

President Trump says that the Delta Smelt is "**an essentially worthless fish**", but at least they don't prey on our livestock as did California grizzly bears. Moreover, the California smelt makes for good eating (Just ask the Italians) unlike the California grizzly bear. What would President Trump have said about the **worth** of the California grizzly bear?

Killed off by 1924, 255 years after the arrival of the Spanish in California

Prior to Spanish settlement in California (1769), some 10,000 grizzly bears inhabited what is modern-day California. Grizzlies lived across California, from the Sierra Nevada to the Central Valley to the coast ranges: everywhere but the low deserts. The population of California grizzlies was almost one-fifth of all the grizzlies in what's now the lower 48 states.

Grizzlies were an obstacle to the growth of large cattle herds.

The existence of California grizzlies conflicted with growth of the main industry of the Californios of Alta California: large cattle herds. Grizzlies were omnivorous, but most of their diet consisted of plant matter. However, they began to prefer the cattle of the

Californios, given its abundance and ready availability on their ranchos. So, grizzlies became enemies of the rancheros. Vaqueros hunted the grizzlies, often roping and capturing them alive to be pitted against other animals in public battles (bloodsports).

California vaqueros lassoing a grizzly bear

Bear-baiting events

Bear-baiting events flourished as popular spectacles in 19th century California. Bloody fights that pitted bears against bulls often inspired betting as to whether the bear or the bull would win.

An illustration of a bear bullfight by HM Stoops. Published in *The San Francisco Call* on January 15, 1911.

**The 1848 California Gold Rush was the death knell of the California grizzly bear.**

The population of Los Californios was small.

The Californios (Spanish and Mexican people in Alta California) killed grizzly bears because they preyed on the large cattle herds of the ranchos. They also captured them for spectacles like bear-bull fights where grizzlies fought to the death. Prior to the U.S. occupation, however, the population of Californios was relatively small, approximately 1500 men and 6500 women and children, many of whom lived in or near the small Pueblo of Los Angeles (present-day Los Angeles). Grizzlies were able to coexist with these small populations of humans.

The population of gold seekers was large.

Everything changed with the Gold Rush. The California gold rush began on January 24, 1848 when gold was found by James W. Marshall at Sutter's Mill in Coloma, California.

The news of gold brought approximately 300,000 people to California from the rest of the United States and abroad. As gold seekers and their families began to populate the state, the grizzly stood its ground, refusing to retreat in the face of advancing civilization. Although California was home to as many as 10,000 bears prior to the Gold Rush in 1848, less than 75 years after the discovery of gold, every grizzly in California had been tracked down and killed. The appearance of the repeating rifle in 1848 spelled death for the grizzly which has been extinct since 1924.

## The Essence of the California Grizzly Bear-Human Conflict

To survive, California grizzly bears need large, unfragmented territories. But this is land humans could use to grow their populations and economies. The presence of California grizzly bears was an obstacle to the expansion of human populations and economies, e.g., livestock ranching. California grizzly bears preyed on livestock, e.g., cattle.

California grizzly bears were exterminated in California (by 1924) because their existence impeded the growth of human populations and economies. Business cherishes our growing human population because it is the main driver of economic growth in the United States. (Consumer spending makes up about 70% of the US economy.)

## An animal that Californians hunted to extinction is on our state flag.

## A requirement for using the California grizzly bear on our state flag.

In 1953, just 29 years after Californians killed the last California grizzly bear because the existence of the species was an obstacle to our population and economic expansions, Californians had the **gall** to make the California grizzly our official State Animal and put its image on our state flag and seal. It is a disgrace that California is the only state in the union that carries the image of an extinct animal on its state flag and seal.


**Support to reintroduce grizzlies to the state**

Support to reintroduce grizzlies to the state is growing. Despite having one of the largest American black bear populations in the nation, California still has habitat that can sustain about 500 grizzlies. The presence of an additional large mammal could curb overpopulation of the smaller black bear which often is involved in human-bear conflicts when it enters human settlements in pursuit of food and trash.

The U.S. Fish and Wildlife Service has received several petitions to reintroduce grizzly bears to California. However, there is strong opposition to this reintroduction for economic reasons, e.g., from ranchers who are concerned about grizzly bears preying on their livestock.

## The renewed existence of California grizzly bears should be a condition for using their image on our state flag and seal.

It is not right to use an animal we hunted to extinction as our official State Animal and to have their image on our state flag and seal if we are unwilling to let them coexist with us. We should either allow California grizzly bears to be reintroduced to California or stop using them as our official State Animal on our state flag and seal.

### A Win-Win-Win (Win$^3$) with a sustainable U.S. population

If the United States had a sustainable population of 179.3 million in 2024 as it had in 1960, it could be realizing a triple-win: **Win-Win-Win (Win$^3$)**.

The peak of the post-WWII "golden era" of manufacturing in the United States was the period from around 1950 to 1973, marked by high levels of industrial production and economic growth across Western Europe and the United States. The population of the United States in **1960** was **179.3 million** (179,323,175), a population within the range of sustainable population levels (150-200 million) recommended by NPG and other groups that research sustainable population levels. However, the U.S. population in **2024** was **341.1 million** (341,145,670), almost twice (1.90 times) our 1960 population, with 161.8 million more Americans, far exceeding the range of sustainable population levels. **But there is a taboo against discussions of sustainable population levels.**

- **Win 1: An economic win with a sustainable U.S. population**

  The United States in 1960 was a winner in international trade with a trade **surplus*** of $3.5 billion with a population of 179.3 million. In 2024, the U.S had a trade **deficit** of **$84.4 billion** with a population of 341.1 million, almost twice our 1960 population. Apparently, 161.8 million more Americans (341.1 million

in 2024 minus 179.3 million in 1960) have not helped the United States become more competitive in international trade in 2024 than we were in 1960. **But there is a taboo against discussions of sustainable population levels.**

* A trade deficit for the United States means that we buy more from our international trading partners than we sell to them. A trade surplus is the opposite.

- **Win 2: A global warming win with a sustainable U.S. population**
  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024, 161.8 million fewer Americans would have been emitting CO2 into the atmosphere which drives global warming and drove the **January 2025 wildfires in Los Angeles**. **But there is a taboo against discussions of sustainable population levels.**

- **Win 3: A species preservation win with a sustainable U.S. population**
  If the United States had a population of 179.3 million in 2024 as it had in 1960 rather than 341.1 million as it had in 2024 with 161.8 million more Americans than in 1960, we would occupy less land and use fewer resources (e.g., water) and make it easier for other species to coexist with us such as the California Delta smelt, the California Condor, the California mountain lion, the California gray wolf, the California Chinook Salmon, and the California grizzly bear. **But there is a taboo against discussions of sustainable population levels.**

## Returning in 2025 to Taking from Our Planet What It Can Restore

**Let us rededicate ourselves on Earth Day 2025 to bringing our demands on our planet back into balance with what it can restore.** Our demands now greatly exceed our

planet's restorative capabilities. As noted above, a recent study by the United Nations University warns, "Humans are eating away at their own life support systems at a rate unseen in the past 10,000 years."

Some political and academic factions will oppose such measures because they might impede population growth and the economic growth it drives. Don't they realize that the economy depends on the environment (or more generally the Earth's carrying capacity), not the other way around? The environment would do just fine without the economy, but not the other way around. Or as the Prince of Wales (now King Charles III) put it, "**the economy is a wholly owned subsidiary of Nature and not the other way around**" (*Newsweek*, 12/14/2009).

Sincerely,

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Oakland, California
March 2, 2025

I am a second-generation Irish-American who grew up with immigrant Irish grandparents and aunts in Oakland. I am a graduate of Oakland High School and of the College of Engineering at UC Berkeley. I am fluent in Spanish.