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| --- | --- |
| Jihad ReportOct 26, 2019 -Nov 01, 2019 | |
| Attacks | **23** |
| Killed | **157** |
| Injured | **68** |
| Suicide Blasts | **1** |
| Countries | **11** |

**The Civil war Update**

I woke up in a dream the other day on the beach. It was after the civil war. No, it wasn’t 1864. It was 2024.

This war has been planned for a long time by an entity that sits in the basement of the Global Syndicate. That is the highest position in the organization. The basement. It is cold and dank and reeks of old skin and stale air. The power that lives there is greater than anything this world has ever seen. It has consumed hundreds of worlds like Earth, but it has never before faced humans. That is the challenge.

You see, we humans are also timeless beings, in a different sort of way. We each possess an eternal spirit inside of us that is an integral part of the physical universe. Our core being is able to withstand pure light, unlike the dark force in the basement of the Syndicate. That being is timeless in the sense that it lives through the ages in one body. We take on thousands and sometimes millions of bodies to reach our full potential. The dark entity has a goal and has developed proven methods for reaching that goal.

I diverge. I want to tell you about the war, first, and then I will tell you about the goal.

There is much to build up to the actual conflict of 2021 that takes more than 93 years, but the thing that actually brought people to violence was actually quite remarkable.

In 2020, the President realized that removing the Syndicate’s generals and soldiers from the American government would probably kill the patient. That is to say, there were so many of them on so many levels that prosecuting them for their crimes would plunge the country into anarchy. So many Senators, Congressmen, judges, governors, mayors, and even city council members were guilty of corruption on a scale that even a movie script wouldn’t be able to capture, that arresting them all would cripple the country.

The propaganda machine of the Syndicate was drenching the airwaves and cyberwaves with warnings that the President was destroying the Democracy. In actuality, he was doing just that. You see, the Syndicate had set up the largest government in world history for the express purpose of choking humans slowly to death. No matter how hard they worked or how productive they became, the government would always demand that much more. It was like a giant karmic credit card that could never be paid off.

He was tearing down the government they had built over a period of 93 years. The tax money that was being laundered through more than 200 cities in 28 States was staggering, and it was making the Syndicate wealthy and powerful beyond measure. When President Trump figured out how they were doing it, he stopped the flow of money. Their empires began crumbling, and one by one the generals began dying or being killed.

The Democrats could not field a nominee during the primary. The 2020 Democrat Convention was brokered and turned into a corporate version of Let’s Make a Deal. Donald Trump had done a masterful job of labeling every single Democrat a Socialist. They seemed to wear the brown uniform well, until the convention. They went to the floor at war. The place was packed with people, inside and out. Suddenly, the Clintons and the Obamas showed up and moved to put the wives in as President and Vice President. They decried the Socialists and stood like icons of moderate America. They quickly performed a Coup on their own Party and took the nomination away from the other candidates as though they were not even there.

The debates could not have been more divided. Donald Trump was on one side, and anti-Trump was on the other side. Trump preached love and growth, and the Democrats preached impeachment and corporate greed gone amuck on the other side. The rich were pitted against the poor. Blacks against whites. Christians against the Muslims. Students against banks. Immigrants against citizens. All genders against heterosexuals. The battle lines could not have been drawn more clearly.

The election of 2020 was a landslide like no one had ever seen. Every precinct was overwhelmed with people wanting to vote American. City after city and city closed their polling stations, claiming they were afraid of the energy in the massive lines. More than 100 million people tried to vote that day to reelect Donald Trump, and the press couldn’t spin it away. Thousands of independent reporters were showing a patriotic energy like no one had ever seen before. Nothing could stop them.

Then it happened. As the last polling stations closed on the West coast, the Syndicate’s news sources began to incite the crowds. It was orchestrated from a single well-crafted script. The first flash happened around midnight on the West Coast. The second a few moments later in Tennessee. The last one was in the middle of North Carolina about half an hour later. The grid was interrupted with a series of transformer explosions and high-tension line fires. It had been 2 years when I woke up on that beach, and no one could tell me if it was a series of small nukes or just a dozen RPG’s fired into substations. The result was the same.

By Dawn on the East Coast more than 2 million people were dead. Virtually everyone on some sort of medical support in a hospital, nursing home, or clinic died within hours. The black-clad mobs attacked the banking districts in over 200 sanctuary cities as soon as the lights went out, as though they were waiting for the signal. They smashed windows and robbed everything that wasn’t nailed down.

The police didn’t lift a finger. They all stayed home and guarded their own families. There was no fuel, no phones, and no lights across great swaths of the country. The first wave came through without opposition. The next morning, armed Americans showed up to protect their cities.

It was heartbreaking to hear and see. The Dark Entity ruling from behind the scenes must have been laughing loudly for the next few weeks. His mobs of thugs and thieves were already in a dark place headed for a dark corner of hell. But he succeeded in drawing millions of other Americans into that hell as well, by convincing them to use violence to repel the attacks. The ones who fell were almost exclusively kids. Very few were parents themselves. After those first few weeks of battle the revenge cycle began. The friends of the ones who died in the first days wanted revenge. All wars and feuds start this way and find a place where they never really end.

Right up until the day the first shots were fired in self-defense, the Americans in the South called the Americans in the North, Yankees as a long-lived effect of the first civil war in the United States.

The only thing that stopped China from invading while America was dark, which I think was the original plan, is that 200 million Chinese rebelled against the government and so they had their hands full. The Middle East was the same way. Hundreds of revolts took place all over the world at the same time, and the result was the same. The Globalist government was torn down. The people were set free at a terrible cost.

But now, this calm clear morning on the beach in the year 2022, the future looks amazing. The love around the world has never been stronger. The grids and networks are back up, and the propagandists have all been removed. The goodness and bounty of the Earth is no longer hoarded away from the working poor. No one is hungry. No one is afraid. Every dream is now possible.

To infinite and beyond.

**Hong Kong Gong**

First it was [Baoshang Bank](https://www.zerohedge.com/news/2019-05-24/it-begins-first-time-ever-china-takes-over-insolvent-bank), then it was [Bank of Jinzhou](https://www.zerohedge.com/news/2019-07-28/chinese-bank-100-billion-assets-bailed-out), then, two months ago, China'[s Heng Feng Bank](https://www.zerohedge.com/news/2019-08-09/bailout-3-chinese-bank-200-billion-assets-nationalized)with 1.4 trillion yuan in assets, quietly failed and was just as quietly nationalized. Today, a fourth prominent Chinese bank was on the verge of collapse under the weight of its bad loans, only this time the failure was far less quiet, as depositors of the rural lender swarmed the bank's retail outlets, demanding their money in an angry demonstration of what Beijing is terrified of the most: **a bank run.**

Local business leaders, political cadres and banking executives rallied Thursday at the main branch of Henan Yichuan Rural Commercial Bank, just outside the central Chinese city of Luoyang, where they stood one by one before a microphone to pledge their backing for the bank, as smiling employees brandished wads of cash before television cameras to demonstrate just how much cash, literally, the bank had.

It was China's latest, and most desperate attempt yet to project stability and reassure the public that all is well after rumors spread that the bank’s chairman was in trouble and the bank was on the brink of insolvency. However, [as the WSJ reports](https://www.wsj.com/articles/chinese-withdraw-deposits-from-rural-bank-for-third-day-as-authorities-try-to-project-stability-11572527638), it wasn’t enough for 31-year-old Li Xue, who showed up for the third day Thursday to withdraw thousands of yuan of her mother’s life savings after hearing from fellow villagers that Yichuan Bank - which is the largest lender in Yichuan county by the number of branches and capital, and it is also a member of PBOC’s deposit insurance system, according to the local government - was going under.

Just like any self-respecting Ponzi scheme, the bank's branch managers tried to persuade her to keep her money with them until March, when her mother’s three-year deposits would mature, yielding more than 10,000 yuan in interest. And then, just like any Ponzi scheme, to sweeten the offer, the bank managers also offered her even higher-yielding products, plus supermarket gift cards, just to keep her money there..

**"Our bank is state-backed, and your money is insured by deposit insurance,"** one female manager told her, but Ms. Li refused, her confidence in the state's lies crushed.

“We really can’t afford to lose the money,” she said.

The bank run at Yichuan Bank, located in China's landlocked province of Henan, makes it at least the fourth bank that authorities have rushed to rescue this year. It won't be the last.

As we have [documented previously](https://www.zerohedge.com/news/2019-08-09/bailout-3-chinese-bank-200-billion-assets-nationalized), in recent month China’s banking sector has been dogged by a sudden surge in liquidity concerns, particularly among smaller regional banks that had expanded aggressively in recent years, and were now suffering a surge in bad loans, threatening their viability.

In May, regulators [bailed out Baoshang Bank](https://www.zerohedge.com/news/2019-05-24/it-begins-first-time-ever-china-takes-over-insolvent-bank), in the country’s first bank bailout since the 1990s. That move led to widespread concerns about the health of other small lenders and financial institutions, squeezing liquidity in China’s interbank market. It also led to similar failures - and rescues - of [Bank of Jinzhou](https://www.zerohedge.com/news/2019-07-28/chinese-bank-100-billion-assets-bailed-out)and [Heng Feng Bank](https://www.zerohedge.com/news/2019-08-09/bailout-3-chinese-bank-200-billion-assets-nationalized), both smallish regional banks, yet big enough to convince the local population that something was very rotten with China's financial system.

Prudently, Beijing has been careful not to announce any takeovers, although it has quietly brought in state-owned banks and asset management firms, as well as an arm of the nation’s sovereign-wealth fund, to inject fresh capital and stabilize wobbly banks, as it did most recently in the case of Heng Feng.

Try as Beijing might, however, the bailouts have not gone unnoticed, and culminated in what today has been a three-day bank run at Yichuan Bank.

Like with everything else in China, there is good and bad news.

The good news is that troubled banks accounted for just 4% of total assets in China’s banking system, according to a recent estimate by S&P Global that included poor quality rural institutions flagged by the Chinese central bank. An analysis by Barclays listed those banks that had delayed to disclose their 2018 annual reports: a clear indicator of imminent collapse. Three of the top four banks have already been nationalized or bailed out

**Green Deal**

Green New Dealers have convinced themselves that our planet faces an imminent, existential, manmade climate cataclysm – that can be prevented solely and simply by government edicts replacing fossil fuels with biofuel, wind, solar and battery energy. They achieve this state of absolute certainty largely by propagating constant scare stories, while ignoring and suppressing contradictory evidence and viewpoints.

They deliberately and deceptively talk about “carbon pollution.” Carbon is soot – what our cars, factories and power plants now emit in very small quantities. The honest, accurate term is carbon dioxide: the colorless, odorless, invisible gas that we exhale and plants need to grow, by using the tiny but growing 0.04% of Earth’s atmosphere that is CO2 to grow faster, better, and with greater resistance to droughts.

They are climate change deniers, who say Earth’s climate is stable and can be kept stable by controlling minor factors (human carbon dioxide and methane emissions) and ignoring water vapor (the dominant greenhouse gas) and fluctuations in solar energy, cosmic rays, clouds, oceanic circulation, volcanoes, planetary orbits and other powerful natural forces that have brought climate changes throughout history.

They insist that even another half-degree increase in planetary temperatures since Earth emerged from the Little Ice Age (1350-1850) would be cataclysmic. That’s absurd.

They also rely on computer models that project rapidly soaring temperatures – but already claim average global temperatures should be 0.9 degrees F higher than they actually are, according to satellite and weather balloon measurements.

Climate Crisis True Believers say tornadoes and hurricanes are becoming more frequent and intense. In reality, from 1950-1984, the U.S. averaged 55 violent (F4 to F5) tornadoes every year; but over the next 33 years (1985-2018) only 35 per year. And in 2018, for the first time in recorded history, not one F4-F5 tornado touched down anywhere in the United States. (Is this due to rising atmospheric CO2 levels?)

Similarly, from 1920 through 2005, fifty-two Category 3 to 5 hurricanes made U.S. landfall (1.6/year on average). And then, from October 2005 until August 2017 – a record twelve years – not one Category 3 to 5 ’cane struck the US mainland. Harvey and Irma ended that hurricane drought in 2017, but were hardly unprecedented in their intensity or rainfall. (Was that drought due to rising atmospheric CO2 levels?)

*The Washington Post* reported that “the Arctic Ocean is warming up ... and in some places seals are finding the water too hot.” That was in 1922, and explorers wrote about Arctic ice cycles long before that. “We were astonished by the total absence of ice in Barrow Strait,” Sir Francis McClintock wrote in 1860, whereas at this time in 1854 it was “still frozen up.”

As to continental USA weather, a commentator said “Snows are less frequent and less deep, and the rivers scarcely ever [freeze over] now.” That was Thomas Jefferson, in 1799. The 1970s manmade global cooling scare was replaced by today’s warming crisis.

After rising some 400 feet since the last ice age ended about 12,000 years ago, oceans are rising at 7 to 10 inches per century. That’s a minimal threat to coastal communities, some of which are more seriously threatened by land subsidence – including Chesapeake Bay lands (Maryland), Hampton Roads (Virginia), Houston and Miami.

There has been no increase in the rate of sea level rise in more than a century.

Seawaters cannot become “more acidic.” They are slightly alkaline. They may be getting slightly less alkaline, depending on where and when pH levels are measured. But they are not becoming acidic.

Coral bleaching can result from pollution but is mostly natural, caused by coral animals ejecting their symbiotic zooxanthellae single-celled dinoflagellates, when seawaters become warmer or colder. Corals replace them with new species better adapted to the new temperatures – and then recover their former color and glory, as they have in Australia’s Great Barrier Reef, Hawaii’s reefs and elsewhere. Corals also grow as seas rise, just as they have since the last Pleistocene Ice Age, creating today’s splendid reefs.

Polar bears are at their highest population levels in memory: as many as 31,000 of them. They’ve survived multiple ice ages, inter-glacial periods and warming episodes. They are hardly endangered.

We face no climate crisis, no unprecedented warming, climate or extreme weather threat – man-made or natural. Equally important, proposals to replace fossil fuels with biofuel, wind, solar and battery power would be far more ecologically destructive than their climate crisis – and would severely harm food supplies, nutrition, jobs, living standards, health and life spans, in rich and poor countries alike.

For the United States alone, replacing 100% of U.S. gasoline and petrochemical feed stocks with ethanol would require some 700 million acres of biotech corn. That’s four times the land area of Texas turned into biofuel corn plantations – or soy/canola farms for biodiesel – leaving little land for food and wildlife.

Let’s suppose we’re going to use wind power to replace: the 3.9 billion megawatt-hours of electricity that Americans consumed in 2018, coal and gas-fired backup power plants, natural gas for home heating, coal and gas for factories, and gasoline-powered vehicles. We’ll also use wind turbines to generate enough extra electricity, every windy day, to charge batteries for just seven straight windless days.

We’ll also account for electricity loss along lengthy transmission lines, and every time we charge and discharge batteries. As we erect turbines in steadily lower quality wind locations, instead of generating full nameplate power maybe 33% of the year, on average, they will do so only 16% of the year.

Instead of the 58,000 we have now, the United States would need some 14 million 400-foot-tall turbines, each one capable of generating 1.8 megawatts at full capacity, when the wind is blowing at the proper speed. Each turbine would need about 120 acres of open space and access roads, as at BP’s 50,000-acre Fowler Ridge wind energy factory in Indiana. That would total 1.7 billion acres – ten times the area of Texas ... or most of the Lower 48 United States! Plus thousands of miles of new transmission lines!

Their bird-butchering blades would wipe out raptors, other birds and bats across much of America. Would Extinction Rebellion go apoplectic? or not give a spotted owl hoot, since wind turbines are “eco-friendly”?

Manufacturing those wind turbines would require something on the order of 15 billion tons of steel, copper, rare earth metals, concrete, petroleum-based composites, gravel and other raw materials. Extracting them would require a hundredfold increase in global mining: removing hundreds of billions of tons of earth and rock overburden, and crushing and processing tens of billions of tons of ore.

Imagine the cumulative land use, eminent domain, property rights, environmental and wildlife impacts.

By the way, just so you know, the CRL has entered into a deal with three Wyoming wind farms to dispose of decommissioned blades and motor houses. Waste management experts estimate they’ll take hundreds of years to biodegrade

Hundreds of giant windmill blades are being shipped to a landfill in Wyoming to be buried because they simply can’t be recycled. Local media reports several wind farms in the state are sending over 900 un-reusable blades to the Casper Regional Landfill to be buried.

While nearly 90 percent of old or decommissioned wind turbines, like the motor housing, can be refurbished or at least crushed, fiberglass windmill blades present a problem due to their size and strength.

You see, the crushing equipment is not large enough to crush them.

Prior to burying the cumbersome, sometimes nearly 300-foot long blades, the landfill has to cut them up into smaller pieces onsite and stack them in order to save space during transportation.

To make matters worse, the blades aren’t exactly compostable. The Casper Sold Waste Manager tells Wyoming News Now they’ll take hundreds of years to biodegrade.

“So Casper happens to be, I think it is, the biggest landfill facility in the state of Wyoming. These blades are really big, and they take up a lot of airspace, and our unlined area is very, very large, and it’s going to last hundreds of years.”

Using batteries to replace coal and gas-fired backup power plants for intermittent, weather-dependent wind facilities would require some one billion 100-kilowatt-hour, 1,000-pound lithium and cobalt-based Tesla battery packs – and still more mining and raw materials. And that doesn’t include extra battery storage for the cars, trucks and buses that Green New Dealers want to replace with electric vehicles.

Climate Crisis True Believers proudly proclaim themselves environmental socialists, while obstinately ignoring and suppressing these climate and energy realities. They certainly promote a political-economic system under which central government controls the means of production, while limiting private property rights or replacing them with communal ownership. That’s classic socialism.

 But what they really want is eco-fascism: an even more extreme and intolerant system under which an authoritarian national or international government does not own businesses and industries outright, but dictates what they can make, do, sell and say – while redistributing wealth and property, employing laws, intimidation, and Antifa-style violence to control people’s thinking, speech and access to information.

Along with Google, Face Book, YouTube, Twitter, Wikipedia, universities and the “mainstream” media – they try to censor, marginalize, ostracize, disinvite, shadow-ban, electronic book burn, and algorithm-eradicate differing, alternative, contrarian evidence, analyses and viewpoints on energy and climate.

We must keep speaking truth to power – to ensure that our future is not compromised by climate lies. By the way, right on schedule, the pre-ice age coldness in on its way. An Arctic blast of cold air is likely to roll into the Mid-Atlantic and Northeast regions this coming week, possibly producing one of the first snowmaking weather events of the year by late week.

*"A very cold airmass for early November is poised to impact the Northeast late week into next weekend. A favorable upper atmospheric pattern should allow air from northern Canada to spill into the Great Lakes and Northeast. During this cold stretch, temperatures may average 10-20 degree F below normal for most of the Northeast, including the major cities. This may influence heating oil and natural gas demand, while allowing interior Northeast ski resorts to begin making snow for the winter season ahead,*[*stated Ed Vallee, head meteorologist at Empire Weather LLC*](https://twitter.com/EdValleeWx)*.*

The Temperature Anomaly map that shows from November 03-10, temperatures across the Mid-Atlantic and Northeast could be significantly below trend, setting the scene for a possible snow event late next week.

You see, Earth’s atmosphere is extremely thin right now. That is to say, the altitude of the atmosphere has fallen to levels never recorded before. Normally, the atmosphere extends 300 miles into space. During Solar Cycle 24, the atmosphere has begun shrinking to levels never seen before.

New measurements from a NASA satellite show a dramatic cooling in the upper atmosphere that correlates with the extremely dormant phase of the current solar cycle. For the first time, researchers can show a timely link between the Sun and the climate of Earth's thermosphere, the region above 100 km, an essential step in making accurate predictions of climate change in the high atmosphere.  
  
Scientists from NASA's Langley Research Center and Hampton University in Hampton, Va., and the National Center for Atmospheric Research in Boulder, Colo., presented these results at the fall meeting of the American Geophysical Union in San Francisco late last year. The trend has not reversed in the last 12 months, which means the winters will be colder, and the summers will be hotter.  
  
Earth's thermosphere and mesosphere have been the least explored regions of the atmosphere. The NASA Thermosphere-Ionosphere-Mesosphere Energetics and Dynamics (TIMED) mission was developed to explore the Earth's atmosphere above 60 km altitude and was launched in December 2001. One of four instruments on the TIMED mission, the Sounding of the Atmosphere using Broadband Emission Radiometry (SABER) instrument, was specifically designed to measure the energy budget of the mesosphere and lower thermosphere. The SABER dataset now covers eight years of data and has already provided some basic insight into the heat budget of the thermosphere on a variety of timescales.  
  
The extent of current solar cycle 24’s minimum conditions has created a unique situation for recent SABER datasets, explains Stan Solomon, acting director of the High Altitude Observatory, National Center for Atmospheric Research in Boulder, Colo. The end of solar cycle 23 has offered an opportunity to study the radiative cooling in the thermosphere under exceptionally quiescent conditions.  
  
"The Sun is in a very unusually quiet period. The Earth's thermosphere is responding remarkably - up to an order of magnitude decrease in infrared emission/radiative cooling by some molecules. That means that infrared energy can pass straight through the atmosphere to the surface. It warms the sea, and the dark green areas of the planet as well as people. I am sure you noticed the difference in the way the Sun feels on your skin.

The truth is that UV wavelengths are also passing through quite easily. UVC, which is the germicidal band, is normally blocked by the upper atmosphere. Now, a mere 15 minutes of direct sunlight will deliver a full day’s allowance of radiation.

But, Earth is tilted 23 degree on is axis. That means that during the Winter and Summer solstices, the hemisphere can swing widely in temperature. The summer temperatures will be higher, due to the lack of shielding. The winter temperatures will be colder, due to the lack of insulation. Earth loses energy to space very quickly when it is dark.

That is exactly what we are seeing. Ground that is covered in snow will reflect almost all its energy back out into space, absorbing almost nothing. That is why every single glacier int eh world has been growing during this solar cycle. If solar cycle 25 does not activate the Sun and begin rebuilding Earth’s atmosphere with particles, the farm belt could move toward the equator about 300 miles.

The consensus: Cycle 25 will be similar in size to cycle 24. It is expected that sunspot maximum will occur no earlier than the year 2023 and no later than 2026 with a minimum peak sunspot number of 95 and a maximum of 130. In addition, the panel expects the end of Cycle 24 and start of Cycle 25 to occur no earlier than July, 2019, and no later than September, 2020.

**Deep Sleep**

The deep stages of sleep may give the brain a chance to wash itself free of potentially toxic substances, a new study suggests.

Researchers found that during deep sleep, the "slow-wave" activity of nerve cells appears to make room for cerebral spinal fluid to rhythmically move in and out of the brain — a process believed to rinse out metabolic waste products.

Those waste products include beta-amyloid — a protein that clumps abnormally in the brains of people with dementia, said researcher Laura Lewis, an assistant professor of biomedical engineering at Boston University.

Lewis stressed that the findings, reported in the Nov. 1 issue of Science, do not prove that deep sleep helps ward off dementia or other diseases.

But the ultimate goal of research like this is to understand why poor sleep quality is linked to higher risks of various chronic conditions, from dementia to heart disease to depression, she said.

Researchers have known that cerebral spinal fluid, or CSF, helps clear metabolic byproducts from the brain, so that they do not build up there. They've also known that the process appears to amp up during sleep. But various "hows" and "whys" remained.

So the investigators recruited 11 healthy adults for a sleep study using noninvasive techniques: advanced MRI to monitor fluid flow in the brain, and electroencephalograms to gauge electrical activity in brain cells.

Sleep is marked by REM and non-REM cycles. During REM sleep, breathing and heart rates are relatively higher, and people often have vivid dreams. Non-REM sleep includes stages of deep — or slow-wave — sleep. During those stages, there's a slow-down in brain cell activity, heart rate and blood flow, and research has found that deep sleep may aid memory consolidation and allow the brain to recover from the daily grind.

"There are all these fundamental things your brain is taking care of during deep sleep," Lewis said.

Her team found that housecleaning may be one. When study participants were in deep sleep, each pulse in slow-wave brain activity was followed by oscillations in blood flow and volume, which allowed CSF to flow into fluid-filled cavities in the central brain.

CSF moved in "large, pulsing waves" that were seen only during deep sleep, Lewis explained.

Based on what's known about the work of CSF, experts said it's reasonable to conclude that slow-wave sleep promotes the flushing of waste from the brain.

The study "elegantly" illustrates the importance of deep sleep, according to Dr. Phyllis Zee, a sleep medicine specialist not involved in the work.

It "helps to explain how and why sleep is important for keeping neurons healthy -- facilitating the removal of toxic molecules," said Zee, a professor of neurology at Northwestern University Feinberg School of Medicine, in Chicago.

"One can think of sleep as a top way to take care of your brain," she said.

Another sleep medicine specialist agreed. "There is growing evidence, with this study and others, that sleep plays a role in clearing toxins from the brain," said Dr. Raman Malhotra, an associate professor of neurology at Washington University in St. Louis.

Other research has suggested that sleep loss can promote the buildup of "unwanted proteins" in the brain, said Malhotra, who also serves on the board of directors of the American Academy of Sleep Medicine.

A recent government study, for instance, found that one night of sleep deprivation triggered an increase in beta-amyloid in the brains of healthy adults.

"As we learn more about this role of sleep," Malhotra said, "it may help explain why individuals who don't get enough sleep, or suffer from sleep disorders, are at higher risk of certain chronic health conditions.

**Not Coming**

Energy Secretary Rick Perry will refuse to appear before a closed session of House of Representatives committees investigating President Donald Trump for possible impeachment, an Energy Department spokeswoman said on Friday.

"The Secretary will not partake in a secret star chamber inquisition where agency counsel is forbidden to be present," spokeswoman Shaylyn Hynes said in a statement.

"If the committee is interested in conducting a serious proceeding they are welcome to send for the Secretary's consideration an invitation to participate in an open hearing where the Department's counsel can be present and the American people can witness," she said.

Perry and White House budget office acting director Russell Vought had been asked to testify next week in the impeachment inquiry.

Perry is the first member of Trump’s Cabinet asked to appear before House investigators.

Both Perry and Vought were asked to appear on Wednesday in closed session.

**Consciousness**

Explaining how something as complex as consciousness can emerge from a grey, jelly-like lump of tissue in the head is arguably the greatest scientific challenge of our time. The brain is an extraordinarily [complex organ](https://theconversation.com/the-brain-a-radical-rethink-is-needed-to-understand-it-74460), consisting of almost 100 billion cells – known as neurons – each connected to 10,000 others, yielding some ten trillion nerve connections.

We have made a [great deal of progress](https://theconversation.com/how-memories-are-formed-and-retrieved-by-the-brain-revealed-in-a-new-study-125361) in understanding brain activity, and how it contributes to human behaviour. But what no one has so far managed to explain is how all of this results in feelings, emotions and experiences. How does the passing around of electrical and chemical signals between neurons result in a feeling of pain or an experience of red?

There is [growing suspicion](https://www.theguardian.com/science/2015/jan/21/-sp-why-cant-worlds-greatest-minds-solve-mystery-consciousness) that conventional scientific methods will never be able answer these questions. Luckily, there is an alternative approach that may ultimately be able to crack the mystery.

For much of the 20th century, there was a great taboo against querying the mysterious inner world of consciousness – it was not taken to be a fitting topic for “serious science”. Things have changed a lot, and there is now broad agreement that the problem of consciousness is a serious scientific issue. But many consciousness researchers underestimate the depth of the challenge, believing that we just need to continue examining the physical structures of the brain to work out how they produce consciousness.

The problem of consciousness, however, is radically unlike any other scientific problem. One reason is that consciousness is unobservable. You can’t look inside someone’s head and see their feelings and experiences. If we were just going off what we can observe from a third-person perspective, we would have no grounds for postulating consciousness at all.

Of course, scientists are used to dealing with unobservables. Electrons, for example, are too small to be seen. But scientists postulate unobservable entities in order to explain what we observe, such as lightning or vapour trails in cloud chambers. But in the unique case of consciousness, the thing to be explained cannot be observed. We know that consciousness exists not through experiments but through our immediate awareness of our feelings and experiences.

So how can science ever explain it? When we are dealing with the data of observation, we can do experiments to test whether what we observe matches what the theory predicts. But when we are dealing with the unobservable data of consciousness, this methodology breaks down. The best scientists are able to do is to correlate unobservable experiences with observable processes, by [scanning people’s brains](https://theconversation.com/brain-scans-reveal-why-rewards-and-punishments-dont-seem-to-work-on-teenagers-88177) and relying on their reports regarding their private conscious experiences.

By this method, we can establish, for example, that the invisible feeling of hunger is correlated with visible activity in the brain’s hypothalamus. But the accumulation of such correlations does not amount to a theory of consciousness. What we ultimately want is to explain *why* conscious experiences are correlated with brain activity. Why is it that such activity in the hypothalamus comes along with a feeling of hunger?

In fact, we should not be surprised that our standard scientific method struggles to deal with consciousness. As I explore in my new book, [Galileo’s Error: Foundations for a New Science of Consciousness,](https://www.amazon.co.uk/Galileos-Error-Foundations-Science-Consciousness/dp/1846046017/) modern science was explicitly designed to exclude consciousness.

Before the “father of modern science” [Galileo Galilei](https://en.wikipedia.org/wiki/Galileo_Galilei), scientists believed that the physical world was filled with qualities, such as colours and smells. But Galileo wanted a purely quantitative science of the physical world, and he therefore proposed that these qualities were not really in the physical world but in consciousness, which he stipulated was outside of the domain of science.

This worldview forms the backdrop of science to this day. And so long as we work within it, the best we can do is to establish correlations between the quantitative brain processes we can see and the qualitative experiences that we can’t, with no way of explaining why they go together.

**Mind is matter**

Every physicist runs into the same limit. Physical science doesn’t really tell us what matter is. We like definitions and conversion factors, but when we get to the edge of the third dimension, and all the matter that we see is reduced to the single proton, we all run into the same void of knowledge. Oh, we’ve splattered the little beggars apart a gazillion times, but for all our money and power we have not been able to make even one proton.

This may seem bizarre, but it turns out that physics is confined to telling us about the *behavior* of matter, and not its origin or why it originates in the first place. For example, matter has mass and charge and spin, but these properties are entirely characterized in terms of behavior – attraction, repulsion, frequency, and resistance to acceleration called inertia. Physics tells us nothing about what philosophers like to call “the intrinsic nature of matter”, how matter is in and of itself.

It turns out that there is a huge hole in our scientific 3-d world view. Physics leaves us completely in the dark about what matter really is. The proposal of Russell and Eddington was to fill that hole with consciousness.

The result is a type of “[panpsychism](https://plato.stanford.edu/entries/panpsychism/)” – an ancient view that consciousness is a fundamental and ubiquitous feature of the physical world. But the [“new wave” of panpsychism](https://qz.com/1184574/the-idea-that-everything-from-spoons-to-stones-are-conscious-is-gaining-academic-credibility/) lacks the mystical connotations of previous forms of the view. There is only matter – nothing spiritual or supernatural – but matter can be described from two perspectives. Physical science describes matter “from the outside”, in terms of its behaviour, but matter “from the inside” is constituted of forms of consciousness.

This means that mind *is* matter, and that even elementary particles exhibit incredibly basic forms of consciousness. Before you write that off, consider this. Consciousness [can vary in complexity](https://philosophynow.org/issues/121/The_Case_For_Panpsychism). We have good reason to think that the conscious experiences of a horse are much less complex than those of a human being, and that the conscious experiences of a rabbit are less sophisticated than those of a horse. As organisms become simpler, there may be a point where consciousness suddenly switches off – but it’s also possible that it just fades but never disappears completely, meaning even an electron has a tiny element of consciousness.

What panpsychism offers us is a simple, elegant way of integrating consciousness into our scientific worldview. Strictly speaking it cannot be tested; the unobservable nature of consciousness entails that any theory of consciousness that goes beyond mere correlations is not strictly speaking testable. But I believe it can be justified by a form of inference to the best explanation: panpsychism is the [simplest theory](https://aeon.co/ideas/panpsychism-is-crazy-but-its-also-most-probably-true) of how consciousness fits in to our scientific story.

While our current scientific approach offers no theory at all – only correlations – the traditional alternative of claiming that consciousness is in the soul leads to a profligate picture of nature in which mind and body are distinct. Panpsychism avoids both of these extremes, and this is why some of our leading neuroscientists are now [embracing it](https://www.scientificamerican.com/article/is-consciousness-universal/) as the best framework for building a science of consciousness.

I am optimistic that we will one day have a science of consciousness, but it won’t be science as we know it today. Nothing less than a revolution is called for, and it’s already on its way

**Offworld – The Space Drone Company**

Future lunar explorers could have [smart robots](https://www.space.com/41041-artificial-intelligence-cimon-space-exploration.html) ready to help them thanks to OffWorld, a company that plans a fleet of industrial machines for destinations all over the solar system.

The California-based company already has some undisclosed Fortune 500 companies paying it to deploy robots on Earth for applications such as mining. And while the tech is all early stage, OffWorld said it plans to go a lot further.

While it's still too early to tell when the robots would leave our planet, OffWorld CEO Jim Keravala told Space.com at the [International Astronautical Congress](https://www.space.com/topics/international-astronautical-congress) that he would be pleased if future robotic generations could assist NASA's astronauts when they land on the surface of the moon, a mission scheduled for 2024.

"We're building up our skills by deploying these robots [now] in mines, construction sites, tunnels and other infrastructure scenarios. As we build that learning, that will give us an unprecedented level of insight … as to how the hardware operates in different environments," Keravala said.

He paused, then made a reference to possibly assisting with NASA’s plans to land humans on the moon. "At some point in time — I hope it's before we have our first woman and man on the surface — we will be deploying our lunar variants to the lunar surface."

The ["master plan" of OffWorld](https://docs.wixstatic.com/ugd/3823cc_71d3cdd3ba8a4b958d3eea7a15bd8ef8.pdf) involves using smart robots, which can learn from experience, or engage in "machine learning" in computer engineer parlance. The robots would do the heavy work to get settlements ready for humans, OffWorld said.

The first thing OffWorld plans to do on the moon is extract water ice for applications ranging from producing drinking water for humans to making rocket fuel.

"They operate in [swarms](https://www.space.com/jumping-flapping-microrobots-swarm-planets.html), collaborating together, making decisions on their own," Keravala said. This allows them to adapt to the environment; in a terrestrial mining area, for example, "they can sense where the minerals and ore exist … and act accordingly."

Powered by solar electricity, these robots would be able to learn on the fly with little human intervention. They would also include modular construction so that similar parts could be used for different kinds of robots — whether in space or on the ground. Eventually, these robots could even self-replicate by building other robots using the local resources available on the [moon, Mars or other destinations](https://www.space.com/40212-nasa-plans-robot-bees-on-mars.html).

The team has 26 people but is growing fast. OffWorld is in the process of establishing an office in Luxembourg, a country particularly friendly to space-resource development, in order to focus on the extraction of lunar volatiles such as water.

OffWorld also plans to heavily involve space engineers and coders in its development. The company will open up a "marketplace" next year to showcase standard interfaces and outputs that will work with customers from all over the world.

**No Website**

Offworld does not have a website or a Google presence. They have a PDF posted online that says:

Diversifying our presence throughout the solar system and beyond is a viable risk mitigation strategy to ensure the long-term survival of life and our civilization. Investing in a life insurance policy does not free us from the responsibility to do everything we can to mitigate against existential risks on our home planet, whether they are natural or human-made. However, should we fail, a self-sustaining human settlement on Mars and elsewhere could carry the torch of our civilization.

Some terrestrial needs are best served by going to space. Today, global communications and positioning are enabled by Earth-orbiting satellites. Tomorrow, we could manufacture new products that could only be made in microgravity, build space solar power stations made of lunar and asteroidal resources to supply billions of people on Earth with uninterrupted solar power. One day, once we figure out how to create closed-loop biological systems on Moon and Mars, we could import

them to Earth to help solve the environmental challenges we have created on our home planet.

Throughout our history, pushing back on a frontier--whether it were a mountain range, an ocean or phenomena we could not explain—energized and challenged generations of explorers and pioneers. Space is “the final frontier” that continues to capture the imagination of generations of stargazers

but so far fewer than 600 people, mostly government-trained astronauts, have had the opportunity to briefly venture outside the Earth’s atmosphere. We believe that a future cohort of pioneers who travel out to stay could energize and challenge how we humans think of ourselves and our place in

the universe.

We see a new generation of industrial robots as the key enabler of human expansion beyond our home planet. Starting from scratch in a new place is hard. The first European settlements in North America were built on hard, life-shortening labor of volunteer or forced settlers. Starting from scratch on the Moon or Mars is hundred times harder as neither of these places naturally sustains life as we know it. To survive, human settlers will need to endure deep space travel, battle harsh radiation, operate in lower gravity, and live in artificial atmosphere. Getting help from Earth could take weeks if you are on the Moon and years if you find yourself on Mars. We believe the best way to reduce the extraordinary risks involved in establishing permanent and sustainable presence on other planetary surfaces is to have a local robotic workforce to do the heavy lifting: build landing pads, excavate underground habitats, extract water ice and materials, make drinkable water, breathable air and rocket propellant, manufacture basic structures and solar cells, produce electricity, and eventually replicate themselves.

**The War on the Republic**

It has taken nearly 86 years, but finally the Justice Department is training its guns on what heretofore was unthinkable, unless you are a career civil libertarian. IN 1935, Roosevelt formed the first Federal Bureau of Investigation. It was tasked to “defend the interests of the nation.” That really had no meaning then, and it has no meaning now, other than to act as the opposition research firm for the Democrat Party. It has never wavered from that charter. In fact, one bureau became many agencies, departments, and administrations. Their tools and their training became the most feared spy force the world has ever seen. It was the true art of war in perfection.

For years the civil libertarians have been warning us that this special and untouchable “intelligence community” posed a threat to democracy, as we know it in these United States. Every so often they would point to some excess of the FBI or the CIA and tell us that the lights were going out in democratic America. Does not the Washington Post run atop its front page the maudlin line, “Democracy Dies in Darkness”?

Well, the darkness descended upon Donald Trump the moment he decided to run for president. President Obama directed his FBI and CIA, in cahoots with Mrs. Hillary Clinton to craft and codify the infamous “dossier” she financed. It threw a bloody blanket of darkness over his campaign. A swift succession of assassinations occurred as the Obama Administration was ending to cover their tracks, which included nearly dozen Russian diplomats around the world and a promising young campaign worker named Seth Rich.

Late last week, the counter-intelligence effort led by the Trump Administration to find and prosecute these deep State actors took an angry turn. We learned that what had been a Justice Department administrative review had suddenly become much more serious. It has become a criminal inquiry. That means the Justice Department believes there is sufficient evidence that a crime has been committed. Now the prosecutor in charge, John H. Durham, will have the power to subpoena witnesses’ testimony and documents.

He will convene a grand jury and file criminal charges. Mr. Durham and Attorney General William Barr have been looking into the origins of the Obama administration’s spying on Trump. Just how did it begin? And who exactly started it? The trail has led them on a blood trail that has gone to Washington, Italy, Australia, Belgium, the Ukraine, and deep within the guts of the Pentagon itself. They are clearly unsettled by the answers they have found so far. Murder, subterfuge, spying, fraud, counterfeiting, money laundering, bribery, and rape shock their senses every step they take.

I have been studying the Obama administration’s spying on Trump for over seven years. I wrote a #2 best-seller about it that has been in the top 100 books for the last two years. While most of the mainstream media searched desperately for a smoking gun carried by one of President Trump’s people or even by the president himself, I looked elsewhere. I looked at the politicized atmosphere within the FBI and the CIA. I even looked at British intelligence. I found billions in drug cartel cash laundered through banks controlled by the Obama Administration. Recently, Pelosi and Schiff traveled to Jordan in an attempt to secure the flow of cash from their Syrian operation, since Trump moved the American troops out of the way of Turkey’s border arrangements.

The Turks threatened to stop the flow of money from Syria’s lucrative drug trade to the Democrat political machine. While in Jordan making a public show of meeting with King Hussein to criticize the President’s diplomacy, they also met with a courier and gave him instructions to deliver. That courier was followed by US special forces, and he led them to a most valued target; Abu Al-Bagdhadi. Within hours of Pelosi’s return to the US, he was located and killed.

The following morning, President Trump announced the success of the operation, and the fact that Pelosi and Schiff had been kept out of the loop. I know why. Because they were involved in the betrayal of Al-Baghdadi, and didn’t even know it. That was not the best part. President Trump also mentioned the retrieval of tons of valuable intel from the compound, as they were successful in surprising them and stopping them from destroying it.

Bank accounts, phone numbers, email addresses, and records of billions in drug commissions and payouts were recovered. Hours later, Pelosi and Schiff panicked. They sleeplessly obligated every single Democrat to vote for an impeachment inquiry, even though it meant certain political suicide for more than 40 Democrat Congressmen who were elected in districts that voted for President Trump by wide margins.

The former head of CIA, John Brennan, the former head of national intelligence James Clapper, and former head of the FBI, James B. Comey are heavily involved in this entire operation. The murders, the spying, and money laundering on scales never seen before in world history were all conducted under these men and their soldiers.

Now if you will remember, President Trump claimed that the Obama administration had bugged Trump Tower. The chattering class raged about how ridiculous this claim was for months. But we now know that Trump was right. Comey had sitting on his desk FISA warrants on Carter Page, Paul Manafort, and Michael Flynn that gave him the power to reach into Trump Tower and intercept the campaign’s communications. The worst attempted Coup in US history has now been exposed, thanks to Charm of Favor and the great work done by the Trump DOJ.

The most perverse irony in all of this is that the American officials who bleated the loudest about “malicious actors interfering in the election” presided over a government that actually did. It was members of the U.S. government who spied upon Trump’s campaign and sought to sabotage it through entrapment schemes and criminal leaks. It was Brennan who turned to foreigners to craft the narrative and actually do the spying he knew he could not get authorized inside the US. They failed, but not for lack of trying. Just ask Harry Reid, who has noted Brennan’s “ulterior motive” for briefing him on Crossfire Hurricane before Election Day.

In the next few days, we will learn much more about this attempted Coup, first through the report of Inspector General Michael Horowitz detailing FISA abuses, then through Durham’s findings, which will result in a raft of indictments. Brace for impact, Americans. The civil war is about to go from cold to hot. The question is already floating out there.

“Is it wet yet?”

I tell you now there is enough evidence to have a trial. The persons of interest have already or are being served tonight. Many of these people will begin dying or attempting to plead for immunity using their lawyers. Right now, it may be a very good time to be a lawyer in Washington DC.

Do I hope that this war is fought only in the courts? Yes I do. More than you know. But I can also tell you that this is the most dangerous time in America’s history.

This Global Syndicate does not like losing. They never, and I mean never, will surrender. They don’t care who has to die. In fact, the more people that die in this war, the better. I think it is only your prayers that is keeping this war between various assassins, and has not spilled out into the streets yet. I can tell you that even if you defend yourself against their thugs in the streets, you stand a very good chance of being sent to prison yourself.

**The Bureau of Pre-Crime is Here**

If you read *Charm of Favor* you will see prophetic descriptions of an advanced profiling program that will be developed to identify potential threats to public safety. The VOICE describes a plan to make American shame anyone who would own a gun, based upon frequent horrific mass shootings. It says this is the way is have been done on many worlds. The people will actively expose anyone who owns a gun as a potential mass shooter.

Well, Last Wednesday, U.S. Attorney General William Barr [issued a memorandum](https://www.documentcloud.org/documents/6509496-Attorney-General-Memo-Implementation-of-National.html?embed=true&responsive=false&sidebar=false) to all U.S. attorneys, law enforcement agencies and top ranking Justice Department officials announcing **the imminent implementation of a new “national disruption and early engagement program” aimed at detecting potential mass shooters before they commit any crime.**

Per the memorandum, Barr has “directed the Department [of Justice] and the FBI to lead an effort to refine our ability to identify, assess and engage potential mass shooters before they strike.” The Attorney General further described the coming initiative, slated to be implemented early next year, as***“an efficient, effective and programmatic strategy to disrupt individuals who are mobilizing towards violence, by all lawful means.”*** I want you to understand one important thing. These individuals don’t have to have actually committed any sort of crime, yet.

Barr also requested that those who received the memorandum send their “best and brightest” to a training conference at FBI headquarters this coming December where the DOJ, FBI and “private sector partners” will prepare for the full implementation of the new policy and will also be able to provide “new ideas” for inclusion in the program.

Perhaps the most jarring aspect of the memorandum is **Barr’s frank admission that many of the “early engagement” tactics that the new program would utilize were “born of the posture we adopted with respect to terrorist threats.”**

In other words, the foundation for many of the policies utilized following the post-9/11 “war on terror” are also the foundation for the “early engagement” tactics that Barr seeks to use to identify *potential* criminals as part of this new policy. Though those “war on terror” policies have largely targeted individuals abroad, Barr’s memorandum makes it clear that some of those same controversial tactics will soon be used domestically.

**Barr’s memorandum also alludes to current practices by the FBI and DOJ that will shape the new plan.**Though more specifics of the new policy will be provided in the forthcoming notice, Barr notes that “newly developed tactics” used by the Joint Terrorist Task Forces “include the use of clinical psychologists, threat assessment professionals, intervention teams and community groups” to detect risk and suggests that the new “early engagement program” will work along similar lines. Barr also alludes to this “community” approach in a separate instance, when he writes that “when the public ‘says something’ to alert us to a potential threat, we must do something.”

However, the memorandum differentiates suspected terrorists from the individuals this new program is set to pursue. Barr states that, unlike many historical terrorism cases, “many of today’s public safety threats appear abruptly and with sometimes only ambiguous indications of intent” and that many of these individuals “exhibit symptoms of mental illness and/or have substance abuse problems.”

**Thus, the goal of the program is ostensibly to circumvent these issues by finding new and likely controversial ways to determine intent.** As will be shown later in this report, Barr’s recent actions suggest that the way this will be accomplished is through increased mass surveillance of everyday Americans and the use of algorithms to analyze that bulk data for vaguely defined symptoms of “mental illness.”

Of course, this is the metaphysics of this entire Bureau of Pre-Crime. The description and classification of mental illness is the key to its power. What is a mental illness? Your choice of weapon? Medication anyone in your household may be taking? Political activism or affiliation? I guarantee you that affiliation with ANTIFA is not grounds for mental illness, but membership in the NRAA would definitely be considered.

**Barr also suggested the likely courses of action that would follow the identification of a given individual as a “potential mass shooter.”**The Attorney General notes that in past cases individuals deemed a violent or terroristic threat before they commit a crime are subject to “detention, court-ordered mental health treatment, substance abuse counseling, electronic monitoring”, among other measures.

Ostensibly, the new program would then apply these same practices to individuals in the U.S. that federal authorities believe are “mobilizing towards violence,” as Barr put it.

**Bill Barr’s been busy**

The memorandum, despite heralding a new era of Orwellian surveillance and “pre-crime” on a national level, has been sparsely covered by the mainstream media. One of the few reports that did cover the new Justice Department policy, [published Wednesday](https://www.huffpost.com/entry/william-barr-mass-shooting-domestic-terrorism_n_5db05fbee4b0a7dbe8e27e61) by the *Huffington Post*, framed the new Barr-led initiative as largely positive and asserted that the “anti-terror tactics” to which Barr alluded could “help thwart mass shooters.” No mention was made in the piece of the threat such a program is likely to pose to civil liberties.

**Furthermore, no mention was made of Barr’s clear push over the past few months to lay the groundwork for this recently announced program.**Indeed, since becoming Attorney General under President Trump, Barr has spearheaded [numerous efforts](https://www.apnews.com/c44486979ba145979c442abdf66c5d0f) to this end, including pushing for a government backdoor into consumer apps or devices that utilize encryption and for a dramatic increase of long-standing yet controversial warrantless electronic surveillance programs.

On July 23rd, Barr gave[the keynote address](https://www.justice.gov/opa/speech/attorney-general-william-p-barr-delivers-keynote-address-international-conference-cyber) at the[2019 International Conference on Cyber Security](https://iccs.fordham.edu/iccs2019/) (ICCS) and mainly focused on the need for consumer electronic products and applications that use encryption to offer a “backdoor” for the government, specifically law enforcement, in order to obtain access to encrypted communications as a matter of public safety.

**Barr went onto say that “warrant-proof encryption is also seriously impairing our ability to monitor and combat domestic and foreign terrorists.”**Barr stated that “smaller terrorist groups and ‘lone wolf’ actors” — such as those involved in the series of mass shootings in California, Texas and Ohio that occurred in the weeks after his speech — “have turned increasingly to encryption.” Barr later noted that he was specifically referencing encryption used by “consumer products and services such as messaging, smartphones, email, and voice and data applications.”

To overcome the resistance by some private companies — who do not want to renege on their right to privacy by giving the government backdoor access to their devices — and American consumers, Barr tellingly quoted my book by saying “a major incident may occur at any time that will galvanize public opinion on these issues.” Within days of writing that chapter, Las Vegas occurred. Shortly after Barr’s speech, several mass shootings, including one at an El Paso Walmart took place, which again brought the issue to the forefront of political discourse.

As [*MintPress* reported](https://www.mintpressnews.com/william-barr-unanswered-questions-fbi-foreknowledge-el-paso-shooting/261221/) at the time, **Barr’s uncanny prediction and a litany of other oddities related to the El Paso shooting left many answered questions about the FBI’s foreknowledge of the event.** In addition, the tragedy did appear to serve as the very “galvanizing” event that Barr had anticipated, as the solution offered by President Trump in the wake of the shootings was the creation of a government backdoor into encryption as well as calling for the [very pre-crime system](https://thehill.com/policy/technology/456183-trump-calls-for-doj-to-work-with-social-media-companies-to-identify-mass) Barr formally announced just last week.

**The pre-crime dragnet takes shape**

More recently, Barr and U.K. Home Secretary Priti Patel [signed](https://www.justice.gov/opa/pr/us-and-uk-sign-landmark-cross-border-data-access-agreement-combat-criminals-and-terrorists) a data access agreement on October 3rd that allows both countries to demand electronic data on consumers from tech companies based in the other country without legal restrictions. It is the first executive agreement reached as part of the controversial Clarifying Overseas Use of Data Act or CLOUD Act passed by the U.S. Congress last year.

The CLOUD Act has come under fire from rights groups who [have warned](https://www.eff.org/deeplinks/2018/02/cloud-act-dangerous-expansion-police-snooping-cross-border-data) that the legislation gives “unlimited jurisdiction to U.S. law enforcement over any data controlled by a service provider, regardless of where the data is stored and who created it” and that this also “applies to content, metadata, and subscriber information”, including private messages.

Yet, Barr and Patel [claimed](https://www.justice.gov/opa/pr/us-and-uk-sign-landmark-cross-border-data-access-agreement-combat-criminals-and-terrorists) that **the data access agreement will instead “enhance” civil liberties and further asserted that the agreement would be used to go after “pedophiles” and “organized crime”, even though both Barr and his U.K. equivalent have shown minimal interest in pursuing the co-conspirators of child sex trafficker and pedophile Jeffrey Epstein,** whose sex trafficking network [has been linked](https://www.mintpressnews.com/category/epstein-investigation/) to both organized crime and the intelligence agencies of the Five Eyes.

Notably, Jeffrey Epstein also had an apparent interest in pre-crime technologies, and was [a key funder](https://www.mintpressnews.com/cia-israel-mossad-jeffrey-epstein-orwellian-nightmare/261692/) of the controversial technology company **Carbyne911**, along with former Israeli Prime Minister and close Epstein associate Ehud Barak. Carbyne911 is one of several Israeli companies that market their software products to the U.S. as a means of reducing mass shootings and improving the response times of emergency service providers. These companies boast numerous and troubling connections to the governments and intelligence communities of both the U.S. and Israel. Epstein, himself linked to the intelligence apparatuses of [both nations](https://www.mintpressnews.com/category/epstein-investigation/), invested at least $1 million in Carbyne911 through a “data mining” company he controlled.

As was detailed in [a recent *MintPress* exposé](https://www.mintpressnews.com/cia-israel-mossad-jeffrey-epstein-orwellian-nightmare/261692/) on these companies, Carbyne911 and similar companies extract any and all data from consumer smartphones for merely making emergency calls and then use it to “analyze the past and present behavior of their callers, react accordingly, and in time predict future patterns,” with the ultimate goal of smart devices making emergency calls to the authorities, as opposed to human beings.

**Data obtained from these software products, already used by several U.S. counties and slated to be adopted nationwide as part of a new national “next generation” 911 system,** will then be shared with the same law enforcement agencies who will soon be implementing Barr’s “national disruption and early engagement program” to target individuals flagged as potentially violent based on vague criteria.

Notably, following the El Paso shooting, President Trump has been [mulling the creation](https://www.mintpressnews.com/cia-israel-mossad-jeffrey-epstein-orwellian-nightmare/261692/) of a new federal agency known as HARPA that would work with the Department of Justice to use “breakthrough technologies with high specificity and sensitivity for early diagnosis of neuropsychiatric violence,” specifically “advanced analytical tools based on artificial intelligence and machine learning.” The data to be analyzed would be harvested from consumer electronic devices as well as information provided by health-care providers to identify who may be a threat.

**It is important to point out that such initiatives, whether HARPA or Barr’s newly announced program, are likely to define “mental illness” to include some political beliefs, given that the FBI**[**recently stated**](https://nypost.com/2019/08/01/fbi-conspiracy-theory-extremists-are-a-terror-threat/)**in an internal memo that “conspiracy theories” were motivating some domestic terror threats**and a series of questionable academic studies [have sought to link](https://www.geek.com/science/new-study-links-conspiracy-theorists-with-a-mental-disorder-1720483/) “conspiracy theorists” to mental illnesses. Thus, the Department of Justice and “mental health professionals” have essentially already defined those who express disbelief in official government narratives as both a terror threat and mentally ill — and thus worthy of special attention from pre-crime programs.

**Sleepwalking into a nightmare**

This widely overlooked background is crucial to understanding William Barr’s recent memorandum and the massive and greatly underreported shift in the policy it heralds. Over a period of several months, Barr — aided by “private sector partners” as well as other current and former government officials — has been laying the groundwork for the system he has now formally announced.

Through the software products offered by companies like Carbyne911 and through Barr’s personal crusade to mandate government backdoors into encrypted software and products, Barr’s new pre-crime program already has the tools for the mass extraction and storage of consumer data by means of both private tech companies and public services like emergency call centers.

Through the already drafted plan for HARPA and its proposed solution to identifying “mental illness” via artificial intelligence and machine learning, this newly announced “pre-crime” program will have the means to analyze the mass of data harvested from consumer electronic devices from Carbyne and other means using vague “mental health criteria.”

While many of the specifics of the program remain unknown, the actions of Barr and others in government and private sectors show that this newly announced initiative is the product of years of careful planning and many of the tactics and tools it is poised to use have been in the works for months and even years.

In recent decades, and especially after the September 11 attacks, Americans have quietly traded an increasing number of civil liberties for increased government “counter-terrorism” programs and wars purportedly waged to “keep us safe.” Now, those same policies used to target “terrorists” are set to be used against ordinary Americans, whose electronic lives and communications are now set to be scoured for evidence of whatever those in power at the time want to consider “mental illness.” Once the Bureau’s untransparent algorithms flag an individual, that could be enough lead to court-ordered “mental health treatment” or even imprisonment regardless of whether or not a crime was committed or even planned. Certainly that person would have all of his weapons confiscated immediately. They may be placed on a “no-fly” list or worse.

As a consequence, **William Barr’s coming “pre-crime” program is arguably worse than the stuff of dystopian science fiction novels**and films as it not only aims to detain Americans who have committed no crime but will expressly target individuals based on their use of electronic consumer products and the contents of their communications with their friends, family, co-workers, and others.

**Volcanoes**

As if wildfires and [**earthquakes**](https://www.sfgate.com/earthquakes/) weren't enough to lose sleep over, People in California, Oregon and Washington can start worrying about volcanoes too.

A [**new assessment**](https://pubs.er.usgs.gov/publication/sir20185140)carried out by the United States Geological Survey rated 18 U.S. volcanoes as posing a "very high" threat level. Of those, three are in California, five in Alaska, four each in both Washington and Oregon, and two in Hawaii.

Not surprisingly, Hawaii's Kilauea volcano is currently considered by the USGS as the most dangerous volcano on U.S soil, earning an overall threat score of 263. Kilauea made headlines earlier this year when a series of dramatic eruptions spawned [**rivers of lava**](https://www.sfgate.com/nation/article/Kilauea-volcano-lava-river-Hawaii-eruption-13004423.php) on the Big Island. More than 700.

For years now, California has been bracing for the "big one" — the magnitude 6.7 or greater earthquake that is expected to send ripples through the state within the century. But there's another deadly threat that is almost as likely — and that people may be much less prepared for.

Within the next 30 years, there's a 16 percent possibility of a small to moderate-size volcanic eruption occurring somewhere in California, according to a U.S. Geological Survey (USGS) [report](https://pubs.usgs.gov/sir/2018/5159/sir20185159.pdf) posted Monday (Feb. 25). This prediction is based on 5,000 years of volcanic activity records. About 200,000 people live or work in a region at risk of an eruption, and millions visit every year, according to the report.

In comparison, there is a 22 percent possibility that an [earthquake at the San Andreas Fault](https://www.livescience.com/56357-how-san-andreas-earthquake-swarms-increase-risk.html) — sometimes known as "the big one" — will hit within that time frame.

"The potential for damaging earthquakes, landslides, floods, tsunamis, and wildfires is widely recognized in California," researchers wrote in the report. "The same cannot be said for volcanic eruptions, despite the fact that they occur in the state about as frequently as the largest earthquakes on the San Andreas Fault."

There are systems in place to detect potential volcanic eruptions — but understanding the hazards in specific parts of the state is important to reduce damage and loss of life from such events, they wrote.

There are eight volcanic areas throughout the state that experts say are "threatening" to people or property nearby, according to the report. At least seven of the eight volcanoes sit atop magma and are thus considered "active." [[Countdown: History's Most Destructive Volcanoes](https://www.livescience.com/30507-volcanoes-biggest-history.html)]

Of these, Mount Shasta, Medicine Lake volcano and Lassen Volcanic Center in Northern California; as well as the Salton Buttes near the southern border, have erupted within the last 3,000 years and are considered to be high- to very high-risk areas.The Long Valley Volcanic Region in the east has also erupted in that time, but is considered moderate to very high risk. And the Clear Lake Volcanic Field north of San Francisco is also considered to be high to very high risk, though it hasn’t erupted in the last three millennia.

A volcano can cause widespread damage, even when it's not erupting, according to the report. An erupting volcano can cause ballistic showers of rocks, [fast-moving currents](https://www.livescience.com/56791-santorini-tsunamis-caused-by-volcanic-flow.html) of ash or lava called pyroclastic flows and [acid rain](https://www.livescience.com/63065-acid-rain.html). But even volcanoes that are not currently erupting can cause hazards — grounds around the volcano may be unstable and can cause landslides, for example.

While these effects are most strongly felt near the site of an eruption, mudslides or floods can reach over 50 miles (80 kilometers) away, and ashfall can even reach areas 1,000 miles (1,600 km) away, according to the report.

"Volcanic hazards are likely to be more than a local problem, confined to a single county or region," the report said. "A future eruption in northern California, for example, could adversely impact natural resources and infrastructure important to our statewide water, power, and transportation systems, and will certainly require a multi-jurisdictional response effort." The eruption itself, increasing and decreasing in intensity over time, can last for months, years or decades, as can its after-effects.

While volcanic eruptions can't be prevented, they can sometimes be predicted.

A gaping hole in a dying tectonic plate beneath the ocean along the West Coast of the United States may be wreaking havoc at Earth's surface, but not in a way most people might expect.

This gash is so big it may trigger earthquakes off the coast of Northern California and could explain why central Oregon has volcanoes, a new study found.

The researchers in the new study aren't the first to suggest that the Michigan-size Juan de Fuca (pronounced "wahn de fyoo-kuh") plate has a tear. But thanks to a new, detailed dataset, they're the first to say so with certainty. [[The Science of Plate Tectonics and Continental Drift (Infographic)](https://www.livescience.com/54085-plate-tectonics-and-continental-drift-infographic.html)]

"Where other people had debated whether or not it [the tear] was there, we can pretty confidently say that it's real," study lead researcher William Hawley, a doctoral student in the Earth and Planetary Science Department at the University of California, Berkeley, told Live Science.

The Juan de Fuca plate is long, stretching about 600 miles (1,000 kilometers) along the Pacific Northwest coast, from Vancouver Island, Canada, to Cape Mendocino, California. "No part of it is above the water. It's a total oceanic plate" [that's subducting, or diving beneath](https://www.livescience.com/37706-what-is-plate-tectonics.html) another plate, in this case the North American plate (a continental plate), Hawley said.

From 2011 to 2015, scientists boated out over different parts of the Juan de Fuca plate, dropped ocean-bottom seismometers underwater and let these sensors collect seismic data from earthquakes all over the world for a year.

When the year was up, the researchers returned, fished up the seismometers and uploaded the data, which allowed them to create a tomography, or layout, of the plate. Then, they deployed the devices to other spots on the plate. "It was an enormous community effort," Hawley said.

The data from these [seismometers](https://www.livescience.com/6210-seismographs-work.html) showed how seismic waves traveled through the plate, which, in turn, revealed information about the plate's composition and varying temperatures. One region under central Oregon showed a gap in high-velocity seismic waves, which Hawley interpreted to be the hole.

But why does this hole exist? Hawley and study co-researcher Richard Allen, director of the Berkeley Seismological Laboratory, hypothesized that there is a weak zone in the Juan de Fuca plate that exists because the plate formed at two overlapping ridge segments. As this weakened zone of the oceanic plate goes under the continental plate, it unzips from the bottom up (from the underside upward), [creating a gash](https://www.livescience.com/44011-rifting-gondwana-africa-south-america-explained.html).

"This tearing may eventually cause the plate to fragment, and what is left of the small pieces of the plate will attach to other plates nearby," the researchers wrote in the study. In other words, "we're witnessing the death of a plate," but it will take at least a few million years to die, Hawley said.

Hawley and Allen estimated that the hole is located at a depth of between 155 and 60 miles (250 and 100 km). The tear itself, which is narrower on top and widens with depth, is about 120 miles (200 km) wide. [[Hidden Undersea Mountains Uncovered with Satellites (Photos)](https://www.livescience.com/48116-hidden-seamounts-photos.html)]

Moreover, it appears that material is getting pushed up through the tear, which may have led to the formation of the volcanoes in central Oregon's High Lava Plains about 17 million years ago, Hawley noted. In fact, it's incredible how many geographical and seismic features in the Pacific Northwest fit into the researchers' hypothesis, he said.

"The story links the hole in the tomography with this known weak zone in a plate and with a series of volcanic centers in Oregon and with a series of earthquakes and faults off the coast of Northern California," Hawley said.

The research is a "thought-provoking idea paper," said Ray Wells, a research geologist emeritus with the U.S. Geological Survey in Portland, Oregon, who was not involved with the study.

"I'm happy to see more data indicating a hole in the [Juan de Fuca plate](https://www.livescience.com/62608-cascadia-megaquakes-more-frequent.html)," Wells told Live Science in an email. "The coincidence of the hole with the location of a subducted zone of weakness in the Juan de Fuca plate is interesting and could help to produce a tear."

The USGS California Volcano Observatory uses GPS receivers to record ground deformations, seismometers to measure shaking and spectrometers to detect gas emissions from the ground. An increase in activity on any of these three measurements may be the first sign that a volcano will soon erupt, according to the report.

"Although eruptions cannot be stopped, measures to limit exposure and enhance tolerance can make society less vulnerable to their effects," they wrote. This includes evacuating hazard zones during an eruption, making infrastructure more resistant to its effects, swiftly cleaning up after the event and diverting lava or removing combustible material from its path. In the case of ash fall, people can wear particle masks, avoid driving, seal off buildings, shelter livestock and shelter in place.

Mount Rainier, an active volcano currently at rest between eruptions, is the highest peak in the Cascade Range. Its edifice, capped by snow and 25 glaciers, has been built up by untold eruptions over the past 500,000 years. It last erupted in 1894-95, when small summit explosions were reported by observers in Seattle and Tacoma. Mount Rainier's next eruption might be of similar or larger size and could produce volcanic ash, lava flows, and avalanches of intensely hot rock and volcanic gases, called "pyroclastic flows."

Some of these events swiftly melt snow and ice and could produce torrents of meltwater that pick up loose rock and become rapidly flowing slurries of mud and boulders known as "lahars." In contrast to lava flows and pyroclastic flows that are unlikely to extend farther than 10 miles from the volcano's summit and remain within Mount Rainier National Park, the largest lahars can travel for tens of miles and reach Puget Sound.

Volcanic ash will be distributed downwind, most often toward the east, away from Puget Sound's large population centers. Airborne plumes of volcanic ash can greatly endanger aircraft in flight and seriously disrupt aviation operations. Although seldom life threatening, volcanic ash fallout on the ground can be a nuisance to residents, affect utility and transportation systems, and entail substantial clean-up costs.

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| **Lahar at Nevado del Ruiz** |

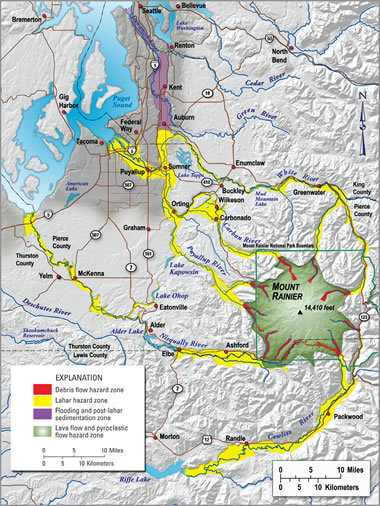


Armero, Colombia, was battered in 1985 by lahars generated by an eruption of glacier-clad Nevado del Ruiz volcano. More than 20,000 people died in the city. Note empty street blocks where structures were swept away. Tragically, safety lay nearby in areas of higher ground. (USGS photograph by R.J. Janda.)

## Lahars Pose the Greatest Risk

At Mount Rainier, the risk from lahars is greater than from lava flows, volcanic ash fall, or other volcanic phenomena because some pathways for future lahars are densely populated and contain important infrastructure such as highways, bridges, ports, and pipelines. Lahars look and behave like flowing concrete, and they destroy or bury most manmade structures in their paths. Past lahars probably traveled 45 to 50 miles per hour and were as much as 100 feet or more thick where confined in valleys near the volcano. They thinned and spread out in the wide valleys downstream, slowing to 15 to 25 miles per hour. Deposits of past lahars are found in all of the valleys that start on Mount Rainier's flanks.

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| **Mount Rainier Lahar and Flows Map** |



**Mount Rainier hazard zones:** This map shows areas that could be affected by debris flows, lahars, lava flows, and pyroclastic flows from Mount Rainier if events similar in size to past events occurred today. Because small lahars are more common than large ones, most lahars would be less extensive than the hazard zone shown on the map and a few would be more extensive. The lahar hazard is not equal in all valleys. For example, the greatest hazard from lahars generated by landslides is on the west side of the volcano because it contains the largest amount of hydrothermally weakened rock. Scientists continue to reevaluate the hazard zones as they learn more about the volcano. Dams and reservoirs on several rivers could lessen the extent of future lahars by trapping all or much of the flow, but they could also increase a lahar's extent if a lahar displaced reservoir water and caused dams to fail. A zone of flooding and post-lahar sedimentation is shown only in the Green and Duwamish River valleys (see Long-Term Effects of Lahars), because in other valleys it is included in the lahar hazard zone. Dark gray shading indicates urbanized areas. (Map simplified from U.S. Geological Survey Open-File Report 98-428.) [**Larger Map.**](https://geology.com/usgs/rainier/rainier-lahar-flow-map-lg.jpg)

## How Hazardous is Mount Rainier?

Mount Rainier has erupted less often and less explosively in recent millennia than its well-known neighbor, Mount St. Helens. However, the proximity of large population centers in valleys susceptible to lahars from Mount Rainier makes it a far greater threat to life and property than Mount St. Helens for the following reasons:

**Population and development at risk:** About 80,000 people and their homes are at risk in Mount Rainier's lahar-hazard zones. Key infrastructure such as major highways and utilities cross through these zones, which also contain economically important businesses, hydroelectric dams, and major seaports.  
  
**Size and frequency of lahars:** During the past several thousand years large lahars have reached the Puget Sound lowland on average at least once every 500 to 1,000 years. Smaller flows not extending as far as the lowland occurred more frequently. If future large lahars happen at rates similar to those of the past, there is roughly a 1-in-10 chance of a lahar reaching the Puget Sound lowland during an average human lifespan.  
  
**There may be little or no advance warning:** Studies by U.S. Geological Survey (USGS) scientists show that at least one of Mount Rainier's recent large landslide-generated lahars may have occurred when the volcano was quiet and not providing the warning signs typical of a restless and erupting volcano. In such a rare case, the only warning could be a report that a lahar is already underway.

## Two Types of Lahars

Mount Rainier can generate two types of lahars that can threaten surrounding valleys:

**Meltwater-generated lahars:** Mount Rainier supports more than one cubic mile of glacial ice-as much as all other Cascade Range volcanoes combined. During past eruptive episodes, swift melting of snow and ice by pyroclastic flows and other events caused numerous lahars. Such lahars would be preceded by events that warn of an impending eruption.  
  
**Landslide-generated lahars:** Landslides can be triggered when molten rock (magma) intrudes into a volcano and destabilizes it, as happened at Mount St. Helens in 1980, or they may be triggered by large earthquakes. They may also be the result of the eventual failure of rocks that were weakened by the action of acidic fluids. Magma releases gases and heat creating hot, acidic groundwater that, over time, can convert hard volcanic rock into weak, clay-rich rock by a process called hydrothermal alteration. When masses of water-saturated clay-rich rock slide away, they transform rapidly into a lahar. Although most large landslides at Mount Rainier occurred during eruptive periods and were probably triggered by magma intrusion or by explosive eruptions rocking the volcano, the origin of at least one, the 500-year-old Electron lahar, may not be related to eruptions. This lahar left deposits as much as 20 feet thick, and buried an old-growth forest in the vicinity of modern-day Orting.

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| **Volcano Evacuation Route** |



**Volcano evacuation signs** direct traffic to safety on higher ground in Pierce County, Washington (USGS photograph by C.L. Driedger).

## Are All Parts of the Volcano Susceptible to Landslides?

The west flank of Mount Rainier, including the head of the Puyallup River, has the greatest potential for unleashing large landslides that become far-traveled lahars, because it has the largest amount of weakened clay-rich rock at high altitude. Therefore, the Puyallup River valley and, to a lesser extent, the Nisqually River valley, whose basin includes some of the weakened rock, are at most risk from such events.

Little Tahoma Peak on the east side of the volcano and many other cliffs and steep slopes can fail in landslides, such as one in December 1963 that traveled several miles, but such events are too small to generate lahars. In contrast to landslides, lahars generated by eruptions could descend any of the valleys originating on Mount Rainier.

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| **How to prepare for a lahar or other volcano hazard:**  **Learn:** Determine whether you live, work, or go to school in a lahar hazard zone. Learn about all volcanic processes that could affect your community.  **Plan:** Develop an emergency plan with your family so that you are prepared for natural hazards and emergencies.  **Inquire:** Ask public officials to advise you about how to respond during any emergency. |

## Long-Term Effects of Lahars

Lahars fill stream channels and bury valley floors with deposits of boulders, sand, and mud a few feet to tens of feet thick. These deposits readily erode as rivers and streams reestablish their channels, shedding abundant sediment downstream over years to decades. Because of this, downstream valley floors initially unaffected by a lahar may later suffer increased flooding and progressive burial by remobilized sediment. Recent studies have revealed extensive layers of sandy sediment from Mount Rainier that extend to the Port of Seattle along the Green and Duwamish River valleys. This sediment was rapidly eroded from the deposits of lahars caused by eruptions about 1,000 years ago, even though the lahars themselves did not extend much past present-day Auburn, which lies about 20 miles south of downtown Seattle.

## Debris Flows Threaten Areas in Mount Rainier National Park

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| |  |  | | --- | --- | | Facts About Mount Rainier | | | **Location:** | Washington, USA | | **Coordinates:** | 46.853oN, 121.76oW | | **Elevation:** | 4392 m (14,410 ft) | | **Volcano Type:** | Stratovolcano | | **Last Eruption:** | 1000 years ago | | **Nearby Volcanoes:** | [**Mount St. Helens**](https://geology.com/usgs/mount-st-helens/) | |

Almost annually, water released from glaciers or runoff from intense rainfall incorporates rocks and sediment to form "debris flows" that affect valleys on the flanks of Mount Rainier. Such debris flows behave like lahars, but are typically of such small size that they seldom travel beyond the base of the volcano and only affect vulnerable areas within the boundaries of Mount Rainier National Park. Summer and autumn are the seasons during which debris flows are most common-times when glaciers are producing large amounts of meltwater and intense rains can fall on little-vegetated, snow-free areas with abundant loose debris. Because debris flows pose risks to park visitors and infrastructure, especially trails, roads, and bridges, Mount Rainier National Park educates staff and visitors about hazards from debris flows and how to avoid them by moving off valley floors.

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| **Osceola Mudflow Lahar Deposit** |



**Studying old lahar deposits:** Geologists study the deposits of past lahars to assess potential future hazards. Here a U.S. Geological Survey geologist samples a log buried in a bouldery lahar deposit east of Enumclaw, Washington. This 5,600 year-old deposit, called the Osceola Mudflow, was formed when a massive landslide on the east side of Mount Rainier traveled north and west along the White River valley. (USGS photograph by A. Durant.)

## Past Lahars Provide Clues About Future Hazards

Lahars leave behind thick layers of boulders, mud, and logs on valley floors. Geologists use this and other evidence to assess future hazard potential and to map zones in river valleys heading on Mount Rainier that could be inundated by future lahars. Not all valleys would necessarily be affected during a given eruption or large landslide, nor would all lahars in a valley be large enough to extend to hazard-zone boundaries. Lahar hazard zones mapped by the USGS are being used to guide the development of hazard-area regulations in comprehensive land-use plans by counties and cities that lie at the foot of Mount Rainier.

### Lahar Warning System Reduces Risk

Because there is higher level of risk from lahars generated by landslides on the west flank of Mount Rainier, the USGS, Pierce County Department of Emergency Management, and Washington State Emergency Management Division have established a lahar warning system. A detection component consists of arrays of monitors that record the ground vibrations of a lahar. Computerized evaluation of data assesses the presence of a flowing lahar and issues an automatic alert to emergency-management agencies. Emergency managers can then initiate appropriate response measures. City, county, and State agencies design and maintain notification procedures, evacuation routes, and public-education programs.

If a large lahar were generated in the upper Puyallup River valley without the precursors that typically herald volcanic unrest and eruption, it could arrive at the City of Orting as little as 40 minutes after the initial warning is sounded. Time could be short, and successful mitigation will depend on effective notification of people at risk, public understanding of the hazard, and prompt response by citizens. This system for automatic detection and notification of a lahar reduces-but does not eliminate-risk in the lahar pathways.

## Monitoring and Emergency Planning Are Ongoing

The USGS, in cooperation with the Pacific Northwest Seismic Network at the University of Washington, continuously monitors Mount Rainier and assesses potential hazards stemming from volcanic activity. Volcanoes often show signs of unrest, such as increased seismicity (earthquakes) and emission of volcanic gases and swelling of the volcano, days to months in advance of an eruption. When unrest is detected, scientists will notify emergency-management officials and increase monitoring efforts.

The Mount Rainier Volcanic Hazards Response Plan, which was created by cooperating local, county, State, and Federal agencies, is [**on the Web**](https://volcanoes.usgs.gov/vsc/file_mngr/file-56/mtrainier_volcanic_hazards_response_plan.pdf). The plan describes the responsibilities of agencies and how they will communicate with each other and the public during a volcanic crisis.

## What to Do if Threatened by a Lahar or Debris Flow

Know the signs of debris flows and lahars. Experience from around the world shows that moving to high ground off the valley floor is the only way to ensure safety during a lahar. When hiking in valleys on the slopes of Mount Rainier during late summer or during intense rainfall, be alert for the signs of an approaching debris flow-ground shaking and roaring sound-and move up the valley wall to higher ground. The same is true for lahars, but, because they affect much larger areas, people need to move out of threatened areas before lahars get close. Lahars are almost always preceded by volcanic unrest, so in most instances there will be time to warn people when there is an increased risk. Obtain a NOAA weather radio to receive alerts about possible lahars, as well as other natural hazards (for further information on the Web go to