



California Water and Infrastructure Report

Formerly, the “California Drought (and Flood) Update”

For March 7 , 2019

by Patrick Ruckert

Published weekly since July, 2014

An archive of all these weekly reports can be found at both links below:

<http://www.californiadroughtupdate.org>

<https://www.facebook.com/CaliforniaDroughtUpdate>

patruckert@hotmail.com

“On Feb. 20, [the Washington Post reported](#) that President Donald Trump plans to set up a Presidential Committee on Climate Security, to be headed by Dr. William Happer, a Professor of Physics at Princeton University. This committee would be liberated to do the unthinkable: To engage in an open, public discussion of whether human emissions of CO2 into the atmosphere can cause significant and possibly irreparable harm to present and future generations, and to the Earth itself (whatever that might be taken to mean).

“What is there to fear from an open, public review by a government committee of the available evidence? Is it a sin to question the perceived status quo? If the science is so certain, why the fear about subjecting it to reasoned scrutiny?”

“Is there something we are not supposed to find out?”

From: [Is Climate Change Truly an Existential Threat? Allow Science, not Hysteria, To Decide](#)

A Note To Readers

The lead quotation is from a short item you will find accompanied by two more related to the topic of climate change in the section below under the title: **A Real Debate on Climate Change-- Off With the Gloves**. The President plans to set up a Presidential Committee on Climate Security to create such.

Also In This Week's Report

To begin, will this rain and snow ever stop? I am sure it will, but it has been unusual. The snowpack doubled in February and we have had 20 atmospheric rivers since the first of the year. All the reservoirs are full; drought has disappeared from the state; there is flooding, but not catastrophic.

The **Oroville Dam Update** reports that the new spillway is ready to go.

While the southwest has, at least in some areas, lots of precipitation, mountain snow in the Rockies still is not enough to end the **Colorado River drought**.

While it is still officially an ongoing project, I do believe the the **California High-Speed Rail Project** is doomed. Reported in this section are two articles that underline that evaluation.

Michael Shellenberger, a Time Magazine "Hero of the Environment," published a new article last week on why nuclear power and not renewables can save the planet.

Under the heading, **More on Nuclear**, are reports of a NASA nuclear rocket and a go ahead on the Fast-Neutron Test Reactor.

The **Feature** this week is a rerun: **It Shall be NAWAPA That Will Provide Water to the Southwest**. Since it was first printed here several weeks ago, to ensure continuity for the series, Part I runs again this week, to be followed by subsequent parts over the next several weeks.

Wet, Cold and Snowy: What More Could You Ask For?

California's largest reservoir shot up 39 feet in elevation in February

By [Amy Graff](#), SFGATE

March 1, 2019

<https://www.sfgate.com/weather/article/Shasta-Lake-level-atmospheric-river-wet-winter-13653263.php>



Shasta Dam (Photo: U.S. Bureau Of Reclamation)

The [storms hitting California](#) in February have left their mark on California's largest and most important water reserve.

Shasta Lake jumped 39 feet in elevation since February 1 and as of Tuesday it was at 85 percent of capacity and only 25 feet from its crest.

Amid a wet winter, dramatic lake level rises have been common this year. Folsom Lake east of Sacramento rose 30 feet in January, while Lake Oroville shot up 75 feet in February.

But for a reservoir the immense size of Shasta — you could put four and a half Folsom Lakes in Shasta — a 39-foot increase requires substantially more water.

Sierra snowpack statewide at 153% of average

Department of Water Resources (DWR)

February 28, 2019

Today, the Department of Water Resources (DWR) conducted the third Phillips Station snow survey of 2019. The manual survey recorded 113 inches of snow depth and a snow water equivalent (SWE) of 43.5 inches, which is more than double what was recorded last month at this location. Statewide, the Sierra Nevada snowpack is 153 percent of average for this date, thanks to several atmospheric rivers during February.

Snow water equivalent is the depth of water that theoretically would result if the entire snowpack melted instantaneously. It is an important tool used by water managers across the state to estimate anticipated spring runoff.

How atmospheric river storms tamed California's drought

By Times staff

Mar 01, 2019 |

<https://www.latimes.com/local/lanow/la-me-drought-atmospheric-river-20190301-story.html>

California's unusually wet and cold winter has caused epic snow, [serious flooding](#) and a renewed interest in umbrellas and portable heaters.

But the [atmospheric river storms](#) have also put a huge dent in the state's water woes — at least for now.

It's common in a wet winter, though not a guarantee.

Here's a rundown on how this winter's storms have affected California, from the pages of The Times.

How do things look in the Sierra?

The [snowpack has more than doubled](#) in the last month — to 113 inches deep, or 43½ inches of water if it were to melt — says Chris Orrock, state Department of Water Resources spokesman.

A measurement taken Thursday was the fifth-deepest recorded at Phillips station in the Sierra Nevada since the department started surveying the snow there in 1941, Orrock said.

Where is this wet winter coming from?

The thanks go to a weather [system known as an atmospheric river](#).

Atmospheric rivers are long plumes of water vapor that can [transport tropical moisture](#) across the Pacific Ocean and disperse it in California.

Such storms carry so much water, they've been likened to a river in the sky — hence, their name.

A strong atmospheric river can carry 7½ to 15 times the average flow of liquid water at the mouth of the Mississippi River.

How has this affected California's water supply?

Atmospheric rivers can help vanquish droughts.

In 2016, a series of intense atmospheric rivers helped ease California's epic drought by producing record rain and snow in the northern part of the state.

Just a few atmospheric river events can provide West Coast states such as California with one-third to one-half of their annual precipitation.

But in Southern California, much of that water is wasted.

Climatologist Bill Patzert estimates that more than 80% of the region's rainfall ends up diverted from urban areas in Southern California into the Pacific.

"All those trillions of gallons of rain, which sound so sweet, really end up in the ocean," he said.

"There are some catchment basins, but it's been so dramatically dry for the last two decades that it's not filling them up. Roots and soil are sucking up the water and preventing it from getting to the groundwater basins."

West Coast Storms Get Some Respect With New Scale

[Craig Miller](#)

February 5, 2019

<https://www.kqed.org/science/1937679/proposed-scale-for-atmospheric-river-storms-runs-from-beneficial-to-hazardous>

The storms known as "atmospheric rivers" are make-or-break events for California's water supply.

Category-5 atmospheric river storms, designated as 'primarily hazardous,' come along every three to five years, says Marty Ralph of the Scripps Institution of Oceanography.

They can also be serious troublemakers, causing flooding and mudslides if they linger too long over the state. The recent National Climate Assessment included ARs as a type of extreme storm for the first time, and cites them as a specific risk associated with climate change.

But there hasn't been a convenient way to classify these events according to their ferocity -- until now.

A team of atmospheric scientists have come up with a scale similar to those used for hurricanes, tornadoes, and earthquakes. The new scale, proposed Tuesday in the Bulletin of the American Meteorological Society, is similar to the one used for hurricanes: storms are classified as category 1 through 5, according to how much water they're packing and how long they're likely to stick around, wringing out that moisture as precipitation over land.

"These atmospheric rivers are the most impactful storms for the West," says Marty Ralph, who led the effort to develop the scale at Scripps Institution of Oceanography in San Diego. "In fact, something like 90 percent of the flood damages in the western U.S. come from atmospheric river-type storms. And we need to distinguish the hazardous ones from the beneficial ones."

Here's how the new scale stacks up, with examples provided by Scripps:

- **AR Cat 1 (Weak):** Primarily beneficial. For example, a Feb. 23, 2017 AR hit California, lasted 24 hours at the coast, and produced modest rainfall.
- **AR Cat 2 (Moderate):** Mostly beneficial, but also somewhat hazardous. An atmospheric river on Nov.

19-20, 2016 hit Northern California, lasted 42 hours at the coast, and produced several inches of rain that helped replenish low reservoirs after a drought.

• **AR Cat 3 (Strong):** Balance of beneficial and hazardous. An atmospheric river on Oct. 14-15, 2016 lasted 36 hours at the coast, produced 5-10 inches of rain that helped refill reservoirs after a drought, but also caused some rivers to rise to just below flood stage.

• **AR Cat 4 (Extreme):** Mostly hazardous, but also beneficial. For example, an atmospheric river on Jan. 8-9, 2017 that persisted for 36 hours produced up to 14 inches of rain in the Sierra Nevada and caused at least a dozen rivers to reach flood stage.

• **AR Cat 5 (Exceptional):** Primarily hazardous. For example, a Dec. 29, 1996 to Jan. 2, 1997 atmospheric river lasted over 100 hours at the Central California coast. The associated heavy precipitation and runoff caused more than \$1 billion in damages.

The scale takes into account the amount of water vapor in the air and the strength of low-altitude winds. Storms are downgraded if they're fast-moving and less likely to "stall," dumping huge volumes of rain and snow.

Oroville Dam Update

Water seeps down Oroville Dam spillway

Mar. 5, 2019

Posted By: Stephanie Schmieding

<https://www.actionnewsnow.com/content/news/Water-seeps-down-Oroville-Dam-spillway--506733351.html>

OROVILLE, Calif. - Water has begun to seep down the Oroville dam spillway for the first time since the Oroville Dam spillway crisis in 2017.

The California Department of Water Resources says the gates are not watertight. They are designed to allow small amounts of water to pass through once the lake reaches 813 feet above sea level.

The lake reached 814 feet on Tuesday and water can be seen trickling down the spillway.

The Department of Water resources predicts the gates to the main spillway could be opened within the next few weeks once the lake reaches a certain level. However, their goal is to allow as much water to remain in the lake as possible for water storage and recreation.

Current Oroville Reservoir levels: 814 feet

Projected Elevation on March 9 based on 10-day forecast: 835 feet

Current Oroville Reservoir capacity: 66 percent of total capacity, 94 percent of historical average

Current releases from Hyatt Powerplant: 5,000 cubic feet per second with planned increases

The Department of Water Resources plans to increase releases from the Hyatt Powerplant from 5,000 cubic feet per second to 7,000 cubic feet per second.

Colorado River

Mountain snow still not enough to end Colorado River drought

[Ian James](#)

Arizona Republic

Feb. 27, 2019

<https://www.azcentral.com/story/news/local/arizona-environment/2019/02/27/colorado-river-shortage-arizona-snowy-winter-lake-mead-water-cutback-drought-contingency-plan/2994490002/>

Winter storms have blanketed the mountains with snow across the Colorado River basin. But even this year's above-average snowpack won't be nearly enough to make up for the river's chronic overallocation, compounded by 19 years of drought and the worsening effects of climate change.

Lake Powell and Lake Mead, the country's two largest reservoirs, are now at just 40 percent of full capacity. The reservoirs have together been at their lowest levels since Glen Canyon Dam was built and Lake Powell was filled in the 1960s.

A shortage could be declared at Lake Mead starting next year, leading to water cutbacks in parts of the Southwest. And while it's not yet clear whether Mead will sit below the trigger point for a shortage at the end of the year, federal water managers say chances are the reservoir will cross that critical threshold for the first time.

The latest projections from the federal Bureau of Reclamation this month show a 69 percent chance of a shortage in the river's Lower Basin in 2020.

"Although this year's precipitation levels and snowpack are currently above average and trending in the right direction throughout much of the basin, it would take multiple above-average years for the storage conditions to recover from the drought," Bureau of Reclamation spokeswoman Patti Aaron said in an email. She pointed out that the drought, which started in 2000, has been the driest 19-year period in more than a century of record-keeping.

More On The California High-Speed Rail Project

Last week my report on the California High-Speed Rail Project, while condemning it and calling for shutting it down, also insisted that not only do we need a nation-wide high-speed rail system, but it must be done right.

I have rewritten and added to the introduction of that report, which can be read here:

High Speed Rail: Do It Right-- Begin by shutting down the California high-speed rail project

<http://www.californiadroughtupdate.org/pdf/20190301-High-Speed-Rail-Do-It-Right.pdf?t=1551658490>

This week two new items underline the validity of my report:

Newsom's shorter California bullet train plan likely to run out of money before completion

By [Ralph Vartabedian](#)

Mar 03, 2019

<https://www.latimes.com/local/california/la-me-bullet-plan-challenges-20190303-story.html>

The California bullet train project will probably run out of money before it can fulfill Gov. Gavin Newsom's modest plan to build a high-speed operating segment between Bakersfield and Merced, according to a Times analysis of the state rail authority's financial records.

The governor declared his support for the scaled-back rail plan last month, saying that for the foreseeable future the original goal of a Los Angeles-to-San Francisco system would cost too much and had no path forward. Instead, Newsom said, the state did have the "capacity" to build a 171-mile route through the almond orchards, orange groves, vineyards and oil fields of the Central Valley.

But the project faces many challenges, including an investigation by the inspector general for the U.S. Department of Transportation that has been looking at allegations of poorly controlled or improper spending by the California High-Speed Rail Authority in the Central Valley, according to individuals familiar with the probe.

The biggest problem, however, remains a limited pool of money for the complex project.

Newsom did not provide a cost estimate when he announced his plan to focus on a Bakersfield-to-Merced rail line. If no new problems emerge, the cost will run about \$16 billion to \$18 billion for structures, electrical lines, train stations, signals, a heavy maintenance facility and bullet trains, according to the rail authority's business plan and technical cost documents. Meanwhile, it can count on roughly \$15.1 billion through 2023 to build the Central Valley system, though it could collect more money in later years or the Legislature could increase funding.

Bullet-train land acquisitions are moving so slowly a judge hearing the cases calls it a 'lifetime job'

By [Ralph Vartabedian](#)

Nov 20, 2018 | 4:00 AM

Hanford, Calif.

<https://www.latimes.com/local/california/la-me-bullet-judge-201801120-story.html>

Once a month, Judge Edward M. Ross packs his car and drives 200 miles to preside over the biggest government taking of private land in California in decades.

At a courthouse in the Central Valley city of Hanford, Ross, 85, dons his black robe and hears land disputes involving the California bullet train, which is planned to slice through one of the richest agricultural belts in the nation.

The court depends on the previously retired Manhattan Beach jurist since every Kings County Superior Court judge has refused to hear the cases — citing unspecified "personal reasons." Some locals say the judges are simply afraid of angering farmers.

The workload — much like the commute — seems to drag on.

"When I was asked to handle these railroad cases, I was told it may take a year," Ross said during a recent hearing before a mostly empty courtroom. "Now I think it may take a lifetime. OK, no problem."

Eight years ago, the California High-Speed Rail Authority estimated it would cost \$332 million to acquire the route spanning the Central Valley's orchards, vineyards, dairies and cities.

The process, however, has proven far more legally tangled. The 1,900 properties in the Central Valley are now budgeted at \$1.5 billion, part of the reason the project is 13 years behind schedule and at \$44 billion over budget.

There are fights about farm wells and trellises, the price of nut trees separate from the land and the emotional value of land held by families for more than a century.

The proceedings offer a window into the project's problems, which could dog it for years. The slow progress has pushed back construction for the Los Angeles-to-San Francisco system, caused delay claims by contractors and hardened the emotions of property owners.

It is harder in practice than it sounds.

Central Valley fields are home to some of the most sophisticated irrigation and well systems, pest control practices and farm equipment movements in the world. Farmers howled over the plan to cut through the county diagonally years ago, warning that the rail authority didn't know how much disruption it would cause.

When a track cuts a vineyard at an angle, for instance, the trellis structure and the grape vines must be either removed or restrung. That can curtail production for years and the state has to pay for it, farmers say.

"Somebody at high-speed rail drew a line for a route on Google Earth and had no idea of what was on the ground or how they are affecting it," said Michael Dias, a Hanford lawyer who defends farmers and is a grape and nut grower with his own bullet-train dispute.

Award Winning Environmentalist Goes Nuclear

Why Renewables Can't Save the Planet

by [Michael Shellenberger](#)

February 27, 2019

<https://quilllette.com/2019/02/27/why-renewables-cant-save-the-planet/>

Michael Shellenberger is a Time Magazine "Hero of the Environment," and president of Environmental Progress, an independent research and policy organization. Follow him on Twitter @ShellenbergerMD

In 2002, shortly after I turned 30, I decided I wanted to dedicate myself to addressing climate change. I was worried that global warming would end up destroying many of the natural environments that people had worked so hard to protect.

I thought the solutions were pretty straightforward: solar panels on every roof, electric cars in every driveway, etc. The main obstacles, I believed, were political. And so [I helped](#) organize a coalition of America's largest labor unions and environmental groups. Our proposal was for a \$300 billion dollar investment in renewables. We would not only prevent climate change but also create millions of new jobs in a fast-growing high-tech sector.

Our efforts paid off in 2007 when then-presidential candidate Barack Obama embraced our vision. Between 2009–15, the U.S. invested \$150 billion dollars in renewables and other forms of clean tech. But right away we ran into trouble.

The first was around land use. Electricity from solar roofs costs about twice as much as electricity from solar farms, but solar and wind farms require huge amounts of land. That, along with the fact that solar and wind farms require long new transmissions lines, and are opposed by local communities and

conservationists trying to preserve wildlife, particularly birds.

Another challenge was the intermittent nature of solar and wind energies. When the sun stops shining and the wind stops blowing, you have to quickly be able to ramp up another source of energy.

It seemed to me that most, if not all, of the problems from scaling up solar and wind energies could be solved through more technological innovation.

But, as the years went by, the problems persisted and in some cases grew worse.

Without large-scale ways to back-up solar energy California has had to [block electricity](#) coming from solar farms when it's extremely sunny, or [pay neighboring states](#) to take it from us so we can avoid blowing-out our grid.

Despite what you've heard, [there is no "battery revolution" on the way](#), for well-understood technical and economic reasons.

As we were learning of these impacts, it gradually dawned on me that there was no amount of technological innovation that could solve the fundamental problem with renewables.

You can make solar panels cheaper and wind turbines bigger, but you can't make the sun shine more regularly or the wind blow more reliably. I came to understand the environmental implications of the physics of energy. In order to produce significant amounts of electricity from weak energy flows, you just have to spread them over enormous areas. In other words, the trouble with renewables isn't fundamentally technical—it's natural.

There's been a lot of publicity about how solar panels and wind turbines have come down in cost. But those one-time cost savings from making them in big Chinese factories have been outweighed by the high cost of dealing with their unreliability.

Consider California. Between 2011–17 the cost of solar panels declined about 75 percent, and yet our electricity prices [rose five times more](#) than they did in the rest of the U.S. It's the same story in Germany, the world leader in solar and wind energy. Its electricity prices increased 50 percent between 2006–17, as it scaled up renewables.

What about all the headlines about expensive nuclear and cheap solar and wind? They are largely an illusion resulting from the fact that 70 to 80 percent of the costs of building nuclear plants are up-front, whereas the costs given for solar and wind don't include the high cost of transmission lines, new dams, or other forms of battery.

It's reasonable to ask whether nuclear power is safe, and what happens with its waste.

It turns out that scientists have studied the health and safety of different energy sources since the 1960s. Every major study, including a recent one by the British medical journal [Lancet](#), finds the same thing: nuclear is the safest way to make reliable electricity.

Because nuclear plants produce heat without fire, they emit no air pollution in the form of smoke. By contrast, the smoke from burning fossil fuels and biomass results in the premature deaths of seven million people per year, [according to](#) the World Health Organization.

Even during the worst accidents, nuclear plants release small amounts of radioactive particulate matter from the tiny quantities of uranium atoms split apart to make heat.

As a result, the climate scientist James Hanson and a colleague [found](#) that nuclear plants have actually saved nearly two million lives to date that would have been lost to air pollution.

But aren't renewables safer? The answer is no. Wind turbines, surprisingly, [kill more people](#) than nuclear plants.

*In other words, **the energy density of the fuel determines its environmental and health impacts.** Spreading more mines and more equipment over larger areas of land is going to have larger environmental and human safety impacts.*

Over the last several hundred years, human beings have been moving away from matter-dense fuels towards energy-dense ones. First we move from renewable fuels like wood, dung, and windmills, and towards the fossil fuels of coal, oil, and natural gas, and eventually to uranium.

‘Decarbonization’ of Germany Will Cost between €818 and €1,442 Billion

Feb. 28 (EIRNS)—A study by the Research Association for Combustion Engines (FVV) in Germany, released by Dr. Ulrich Kramer on Sept. 27, 2018 in Wurzburg and presented at the annual International Internal Engine Conference in Baden-Baden on Feb. 26-27, has thoroughly explored what it will cost to achieve a 100% decarbonization of the transport sector in Germany by 2050.

Even assuming the unrealistic scenario of a 100% shift to so-called “renewable” energy sources, the study, “Defossilizing the Transportation Sector, Options and Requirements for Germany,” considers three options for such a transition: 1. Direct use of electricity in battery electric powertrains; 2. Hydrogen production by electrolysis and its use in a fuel cell; 3. Use of climate-neutral liquid or gaseous fuels in internal combustion engines. The report estimates the cost for each of these would respectively be: 1. €1,327 billion; 2. €1,442 billion; 3. €818,972 billion.

(Note: The amounts in British Pounds equal 1. \$1.737 trillion; 2. \$1.888 trillion; 3. \$1.072 trillion)

More on Nuclear

NASA is going back to the future with nuclear rockets

By Mark R. Whittington

March 5, 2019

https://thehill.com/opinion/technology/432153-nasa-is-going-back-to-the-future-with-nuclear-rockets?fbclid=IwARIH5zthbC97xcha3XWZLjyFhEFUO0-NqOVZJglgHuQ_QRx9vkWpD0F9zjE

Tucked into the recent spending bill that was passed by Congress is a line item for \$100 million for NASA to develop nuclear thermal rocket engines, [according to a recent article in Space News](#). The space agency has dabbled in nuclear rockets off and on since the early 1960s. However, NASA plans to conduct a flight demonstration by 2024 is new.

[As NASA noted](#), the space agency in conjunction with what was then the Atomic Energy Commission worked on a project called the Nuclear Engine for Rocket Vehicle Application (NERVA) program in the 1960s. The NERVA program tested various reactors and engines until the project was closed in 1972, once it became apparent that humans had stopped going to the moon and would not travel to Mars anytime soon.

A nuclear thermal rocket superheats liquid hydrogen in a nuclear reactor and shoots the resulting plasma out a rocket nozzle. Nuclear Thermal Propulsion (NTP) is far more efficient than a chemical rocket, reducing flight times to destinations such as Mars and requiring less fuel. Astronauts would be subjected to less radiation and less time in microgravity using NTP. Even uncrewed space probes would be able to reach their destinations more quickly, opening the solar system to further exploration.

Recent developments in nuclear technology allow engineers to develop cheaper, lighter and safer nuclear thermal propulsion than was envisioned under the NERVA program. Once flight-ready articles are developed, deep-space missions would become even cheaper.

Nuclear propulsion technology will mean the difference between a deep-space exploration program consisting of sorties that land on Mars and visit other destinations, do a lot of good science, then return, and one that expands human civilization throughout the solar system. More people and more cargo can be moved more cheaply, more quickly and more often using nuclear rockets than the tried-and-true chemical rocket engines that have been used ever since rocketry pioneer Robert Goddard conducted his first experiments almost a century ago.

Nuclear rockets, in short, will be as game-changing for space travel as the steam engine was for ocean voyages.

U.S. Energy Secretary Gives Green Light To Proceed on Fast-Neutron Test Reactor

March 1 (EIRNS)—U.S. Energy Secretary Rick Perry announced yesterday that the Department of Energy (DOE) will proceed towards building the Versatile Test Reactor (VTR, also known as the Versatile Fast Neutron Source), as “a key step to implementing President Trump’s direction to revitalize and expand the U.S. nuclear industry.”

The test reactor, projected to start operations in December 2025, “will provide leading edge capability for accelerated testing of advanced nuclear fuels, materials, instrumentation, and sensors. It will allow DOE to modernize its essential nuclear energy infrastructure, and conduct crucial advanced technology and materials testing within the United States in a safe, efficient and timely way,” the DOE press release explains.

Secretary Perry is quoted: “This cutting-edge advanced reactor will give American companies the ability they currently lack to conduct advanced technology and fuels tests without having to go to our competitors in Russia and China.”

This is the first reactor the Department of Energy has built since the 1970s. It will be the first fast-neutron spectrum facility operating in the U.S. for over 20 years; the lack of one precluded “the ability to conduct the types of accelerated irradiation testing needed by non-light water advanced reactor concepts,” the DOE reported.

DOE’s Idaho National Laboratory will lead the VTR project. This is interesting, given that the INL is at the center of Department efforts to develop a U.S. capability for developing advanced nuclear reactors, both fission and fusion.

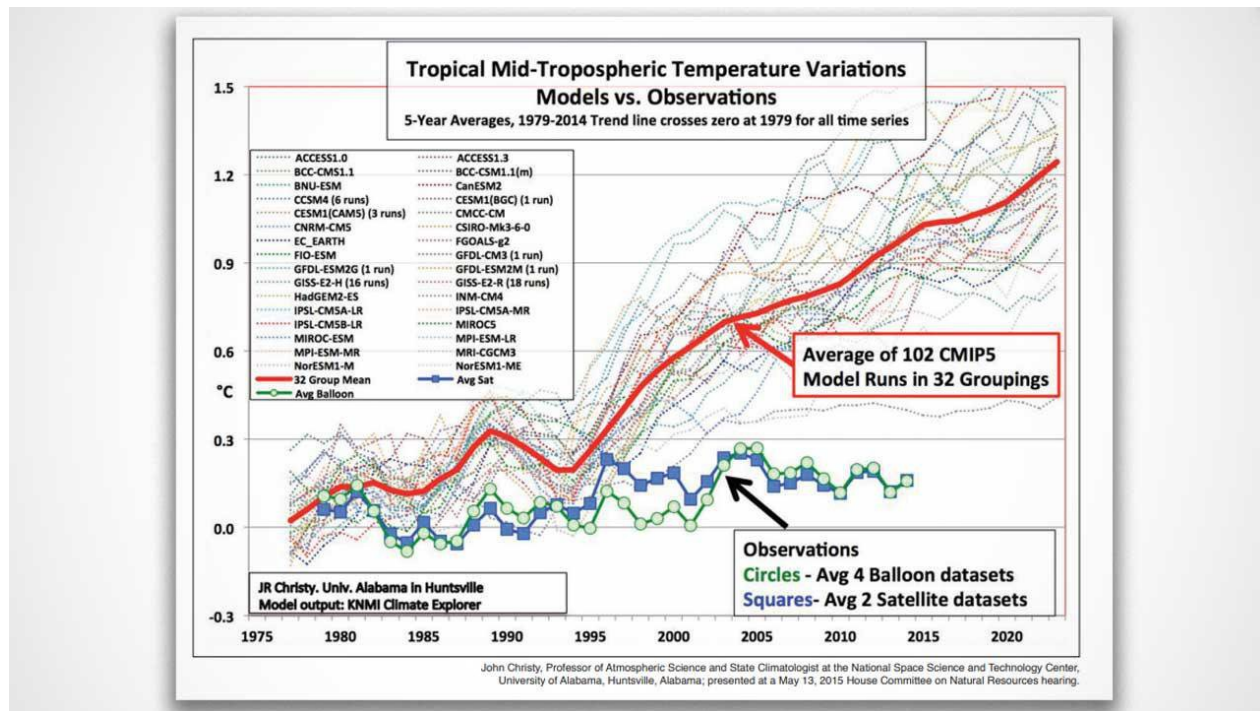
The lead nuclear engineer on the project at INL, Kemal Pasamehmetoglu, told Science magazine that Secretary Perry’s announcement represents only the first of five “critical decisions” which DOE has to make before any construction will begin. But the announcement gives the go-ahead for researchers to work on a conceptual design for the reactor, which Science describes as a small, 300 MW reactor, most likely cooled by liquid sodium, which would not produce electrical power.

A Real Debate on Climate Change-- Off With the Gloves

President Donald Trump plans to set up a Presidential Committee on Climate Security to create a real debate on the topic. Just the idea of such has driven some into hysterics, and they have gotten plenty of

publicity. So here we present some voices who are pleased with the idea:

Is Climate Change Truly an Existential Threat? Allow Science, not Hysteria, To Decide



<https://larouchepac.com/20190306/climate-change-truly-existential-threat-allow-science-not-hysteria-decide>

March 6 2019

On Feb. 20, [the Washington Post reported](#) that President Donald Trump plans to set up a Presidential Committee on Climate Security, to be headed by Dr. William Happer, a Professor of Physics at Princeton University. This committee would be liberated to do the unthinkable: To engage in an open, public discussion of whether human emissions of CO₂ into the atmosphere can cause significant and possibly irreparable harm to present and future generations, and to the Earth itself (whatever that might be taken to mean).

On this topic, we've heard it repeated that the science is settled; that apart from some climate deniers (a term chosen for its parallel to Holocaust deniers), the vast majority of scientists working in the relevant fields are of one mind — they believe disaster is upon us if drastic changes are not urgently made. It is solemnly intoned that this is a matter of science rather than politics, and that disagreement with the teachings of climate change adherents is a kind of heresy against knowledge itself.

Leaving aside the questionable basis for the oft-repeated claims of scientific unanimity, ask a more fundamental question: Have you ever come to know that something is true, on the basis of hearing that many other people believe it? Is that really how science works? One single person can be right, while everyone else is wrong. In fact, this is how all great discoveries have been made!

What is there to fear from an open, public review by a government committee of the available evidence? Is it a sin to question the perceived status quo? If the science is so certain, why the fear about subjecting it to reasoned scrutiny?

Is there something we are not supposed to find out?

[See: The Green New Deal: Just More Austerity & Population Control](#)

White House committee to reassess climate science conclusions: report

By [Michael Burke](#) - 02/24/19

<https://thehill.com/policy/energy-environment/431330-white-house-committee-to-reassess-climate-science-conclusions>

The Trump administration is planning to create an ad hoc group of federal scientists to reassess and counter the government's conclusions on climate change, [The Washington Post](#) reported Sunday.

The National Security Council (NSC) initiative would feature scientists who challenge the seriousness of climate change and the degree to which humans are the cause of climate problems, three unidentified administration officials told the Post.

The Post reported that the plan was discussed by administration officials on Friday in the White House Situation Room.

It is considered a modified version of NSC senior director and climate change denier William Happer's [plan to create a panel on climate change and national security](#), according to the newspaper.

Indefensible Fiction: Climate Change as Security Threat

By Larry Bell

March 3, 2019

<https://www.newsmax.com/larrybell/dod-hansen-nasa-qdr/2019/03/04/id/905346/>

I'm enormously pleased that the Trump White House is working to assemble a panel headed by my very good and highly distinguished friend Dr. William Happer, deputy assistant to the president and senior director for emerging technologies for the National Security Council (NSC), to assess whether climate change poses a national security threat.

Dr. Happer, an emeritus professor of physics at Princeton University, is eminently qualified to spearhead this effort.

The purpose of the new federal panel is "to advise the president on scientific understanding of today's climate, how the climate might change in the future under natural and human influences, and how a changing climate could affect the security of the United States."

The NSC has noted that while the government has issued several major reports identifying climate change as a serious threat, "However, these scientific and national security judgements have not undergone a rigorous independent and adversarial peer review to examine certainties and uncertainties of climate science, as well as implications for national security."

So how did climate ever become a national security issue in the first place?

The answers reveal why such an investigation is long-overdue.

In 2007, then-Senate Armed Services Committee members Hillary Clinton, D-N.Y., and John Warner, R-Va., snuck some language into the National Defense Authorization Act which got the U.S. military into the climate protection business whether they wanted to be or not. The amendment required DOD to consider the effects of climate change upon their facilities, capabilities and missions.

Then in 2010, the DOD issued a Quadrennial Defense Review (QDR) declaring that climate change

will play a "significant role in shaping the future security environment" and cause a "need to adjust to the impacts of climate change on our facilities and military capabilities."

The QDR warned that this climate threat " . . . may act as an accelerant of instability or conflict, placing a burden to respond on civilian institutions and militaries around the world."

Infrastructure

A “Building to Win” Strategy for Congress and President Trump

“Traffic clogging the nation’s roads and bridges is at an all-time high. Ports and airports are at capacity. Unsound infrastructure puts lives at risk. Businesses and manufacturers are cutting into their bottom lines with wasted time and money. According to the NAM’s quarterly survey, manufacturers consider rising transportation costs a top business concern. The United States desperately needs a targeted, substantial investment in revitalizing the nation’s infrastructure. Congress should legislate identifying and prioritizing projects of national and regional significance requiring federal investment and vision to revitalize the nation’s infrastructure.”

National Association of Manufacturer (NAM)

A “Building to Win” Strategy for Congress and President Trump

https://www.nam.org/uploadedFiles/NAM/Pages/Building_to_Win/IIHR.BTW.2019.v08.pdf

Feature: NAWAPA-- the TVA of the 21st Century

Note: I am restarting the series on the **North American Water and Power Alliance** this week, as Part I was run several weeks ago, and some continuity should be maintained. Part II will run next week

Here is an excellent introductory video to the project:

NAWAPA XXI – Feature

<https://www.youtube.com/watch?v=TpX8SG03shU>

July 27, 2012 - This is the executive in-depth 30 minute tour of NAWAPA XXI, produced for water specialists, farmers, policy makers, and others who will be able to put their weight behind this life-like vision of the future.

It Shall be NAWAPA That Will Provide Water to the Southwest

Build NAWAPA XXI-- Part I

This shall be Part I of a series of excerpts from the pamphlet, “Platform for a New Presidency: The Full Recovery Program for the United States.” Subsequent weeks will see more of this pamphlet in these pages.

Originally Published by Executive Intelligence Review

June 7, 2013

https://larouchepub.com/eiw/public/2013/eirv40n23-20130607/20-30_4023.pdf

“Every Member of Congress, everyone in the executive branch from the President on, in the field of national resources, has to plan during their period of administration or office, for the next generation, because no project that we plan today will be beneficial to us. Anything we begin today is for those who come after us. And just as those who began something years ago make it possible for us to be here, I hope we’ll fulfill our responsibility to the next generation that’s going to follow us.”

—President John F. Kennedy Pueblo, Colorado, Aug. 17, 1962

Glass-Steagall halts the collapse, canceling the bail-in and bail-out system, and a credit system creates the potential for economic growth. Credit only functions with goals and an orientation for the economy. We will need a specific project-orientation that can capture the imagination of the citizenry, rapidly create large numbers of opportunities for skilled productive employment, and generate a guaranteed process of economic growth in the coming decades. Surveying the needed improvements in our nation, we see the collapse of our water resources and food supply are arguably the most pressing concerns, both immediately and in the longer term. NAWAPA XXI, an updated version of a project pro-posed by the Ralph Parsons Company in 1964, answers these needs.

NAWAPA XXI is a resource development plan for a continental water management system, built in collaboration with Canada and Mexico. This proposal will launch the greatest development of North America in history; it will double irrigated agricultural farmland, provide ample hydroelectric power, mitigate or eliminate the risk of floods and droughts, balance the continent’s water distribution, and create 7 million highly skilled and highly productive jobs.

Such a plan is essential. Earlier prospects for nu-clear desalination and continent-scale water management systems were sabotaged by the anti-growth and “environmentalist” policies of the 1960s and ’70s, with results that now pose an immediate threat to our ability to supply the most basic of needs: food.

Short-term improvements can come from changing farm policy, regulating commodity speculation, and eliminating the destructive transformation of food into fuel. But shrinking water resources and diminishing groundwater supplies mean sharply reduced population potentials in the U.S., Canada, and Mexico in the future, unless NAWAPA XXI is built.

The History of NAWAPA

Let us remember that only a generation or two ago, all the great rivers of America—the Missouri, the Columbia, the Mississippi, the Tennessee—ran to the sea unharnessed and un-checked. Their power potential was wasted. Their economic benefits were sparse. And their flooding caused an appalling destruction of life and property. This nation began to develop its rivers systematically, to conserve its soil and its water, and to channel the destructive force of these great rivers into light and peace. And today, as a result of this, the face of this nation has been changed. Forests are growing where there was once dirt and waste. Now there is prosperity where our poorest citizens lived. . . . The question which confronts us is the whole question of our resource development in the western United States in the 1960s. Surely a continent so rich in minerals, so blessed with water, and a society so replete with engineers and scientists can make—and must make—the best possible use of the bounty which nature and God have given us, public and private, federal and local, cooperative and corporate.

—President John F. Kennedy, Oahe Dam, South Dakota, Aug. 17, 1962

The Tennessee Valley Authority of President Franklin Roosevelt demonstrated that man was capable of harnessing not just the flow of rivers—turning what had been an enemy of the people living there into an ally working along their side—but of bringing the functioning of entire river systems under his

conscious control. With locks, dams, canals, and reservoirs, we were able to bring the entire hydrological cycle of the Tennessee Valley under our dominion and induce the once wild rivers to act at our behest, generating abundant electricity and irrigating our fields. At the same time, large Colorado River storage facilities began to be constructed, followed by the California Water Plan, and similar projects, creating the potential for the enormous productivity of western agriculture.

At the end of the 1950s, a similar design was conceived for river systems from the Mississippi River all the way west, and north to the Arctic, named the North American Water and Power Alliance (NAWAPA). This would be a TVA, but on a far greater scale. Not only would we engineer the hydrological cycle within a single basin, but we would carry water from one basin to the next, from Alaska to Mexico, linking them to create a North American-wide water management system—a continental TVA.

At the same time, the plans were being laid to bring man into space, engineering studies were underway to demonstrate the feasibility of such a vast project on earth. The NAWAPA plan was originally designed by the Ralph M Parsons engineering firm in California.

In the early 1960s, Sen. Frank Moss of Utah became its leading advocate, forming the Senate Special Sub-committee on Western Water Development to study the feasibility of the plan, as well as entering into an inter-national dialogue with Canada about the shared necessity of the development of both nations. There was early support from Canada's Prime Minister Lester Pearson, as well as widespread bipartisan support in both houses of Congress. In September of 1965, Senator Moss introduced Senate Concurrent Resolution 55, calling for NAWAPA to be referred to the U.S.-Canada International Joint Commission. A similar resolution was introduced in the U.S. House of Representatives for consideration. Among the cosponsors of the NAWAPA resolution was Sen. Robert Kennedy, who wrote in a letter to Moss:

"I am glad to join you as a co-sponsor of S. Con. Res. 55 expressing the sense of Congress that the President refer to the International Joint Commission the subject of the North American Water and Power Alliance. . . . This proposal deserves careful study and consideration by both the United States and Canada, and has applications to the East as well as the West."

However, though a juggernaut was building in favor of this project, official government action on NAWAPA stalled as the United States was sucked into heavy combat in Vietnam in the years following John F. Kennedy's death

Though support for the project continued among leadership in both the United States and Canada, a cultural paradigm shift was in progress away from Kennedy's "New Frontiers" and into drugs, existentialism, and radical environmentalism. With the assassination of Robert Kennedy in June of 1968, the formerly brilliant hope of NAWAPA faded. The outlook for infra-structure-building came to a halt and the government of the United States submitted to the formerly intolerable and unscientific Malthusian doctrines of over-population and scarcity of resources, in contrast with all prior trends of mankind's technological development and role as a creative force on the planet.

Water shortages were guaranteed to come, as pumping drew down underground water levels and aquifers were depleted, while surface water runoff management and reservoirs became completely insufficient for farm, residential, power, manufacturing, and other uses.

(To be continued)