

California Drought Update

For February 11, 2016
by Patrick Ruckert

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A Note To Readers

While the American population remains in the dark about the new financial and economic collapse we entered beginning the first of this year (which Lyndon LaRouche forecast on December 15, stating it would begin on January 1), readers in Britain and Europe are receiving a big daily dose of panic. Bankers, too, have become very loud in expressing their growing hysteria. Here is a statement from one of them published in the *London Telegraph* today, attempting a King Canute: “The world can't afford another financial crash-- it could destroy capitalism as we know it.” His panic comes from the collapse of all the European bank stocks by almost 40 percent since January 1 (despite banks spending billions buying back their own stock). But, it is not just Europe. Citibank is sitting on \$50 billion worth of loans to energy companies, which, like Chesapeake Energy, are defaulting on those loans. People may have noticed that the panic on the U.S. stock market has now moved to the “stampede” phase, and the total loss since January 1 on the world stock markets now tops \$4 trillion. What's next? Evaporation!

Worrying or complaining about this new collapse won't do any good. You have to join the fight to replace this bankrupt system, like President Franklin Roosevelt did in 1933. Bankrupt the bankrupts by reinstating the Glass-Steagall banking law. Then return the U.S. to the American System of national credit (like Abraham Lincoln did), to issue a few trillion in credit to begin building our way out of the hell most Americans now live in. A report issued last week stated that 62 percent of the American people don't even have \$1,000 in life savings. Let's put millions to work building the U.S. side of the Chinese policy of the New Silk Road. Here is our pamphlet on precisely that policy:

LPAC Pamphlet: The U.S. Joins the New Silk Road

<https://larouchepac.com/sites/default/files/US%20Joins%20Silk%20Road-web.pdf>

But, the problem is more fundamental, as addressed by this item from *LaRouche PAC* on February 8, “The Collapse of the Roman Empire — Today.”

larouchepac.com/20160208/collapse-roman-empire-today

The challenge is stated thus:

While Obama has shut down America's once great space program, China is building a capacity to colonize the Moon and reach out to Mars, calling on all the nations of the world to collaborate. While Obama and the British wage wars of destruction across Southwest Asia, China brings the New Silk Road development perspective as the basis for a true peace.

And the concluding paragraph poses the task:

Will the people of the US and Europe be as wise? It is a question of creativity, LaRouche argued today. The failure of the west is not due to Mankind's nature, but due to his corruption. Creativity is expressed in the process of awakening creativity in others, in carrying forth man's true mission, in each generation — to create a new state of the universe. If people can be brought to recognize the reality that the world is careening into chaos and thermonuclear war in front of our eyes, then they will be capable of clearing out the killer in the White House, shutting down the speculators on Wall Street, and joining with the BRICS in building a new world order based on the common aims of Mankind.

So, will it be this:



Thomas Cole: The Course of the Empire — The Consummation; 1836

Or this:



Grand Coulee Dam in Washington State

For we must inspire the American people, and to that end a revived campaign for an aggressive space program has been launched this week by *LaRouche PAC*. See this statement from February 9:

“Without a Space Program, There is No Mankind,” which begins with this paragraph:

Of all the crimes of President Barack Obama, from bailing out a bankrupt Wall Street to conducting permanent warfare, driving the world towards World War III, the most vile crime of all was the destruction of the once vibrant US space program. The space program, especially since the presidency of John Kennedy, was not only the science driver for the economy of the entire world, but also the vision for mankind as a whole, which provoked true creativity in every child, and placed men and women's minds in the future, where creativity lies. The destruction of the space program not only stopped human progress, it drove mankind backwards. It turned back history.

larouchepac.com/20160209/without-space-program-there-no-mankind

With that said, here is this week's report.

Conserve All You Want; Build More Storage Too, But We Must Have New Supplies of Water

To use a tired old saying, because I can't think of a better one, they are ignoring the elephant in the room. For five years of this, the worse drought in the state's history, the state Water Board on one side, and the farmers on the other, have been fighting over water. With deliveries of surface water to both Central Valley farmers and to Southern California for the last three years cut to near zero, what do we hear as a solution? From the Water Board we hear the refrain of "more conservation." From the farmers comes the equally incessant demand to build more storage facilities to capture the rain when it does fall.

The elephant in the room is this: The state now has 39 million people; it will have 50 million in a decade or two. All the conservation possible, including total recycling, will never provide for all those people. Neither will building the Sites Reservoir, Temperance Flat Dam and Reservoir, or two or three more potential storage facilities.

What is missing is the vision and the determination to carry out that vision to bust through this political paralysis by, ironically, going back to the future that should have been the reality today. I have covered this in the past, but repeating it here is probably more necessary than ever.

Here is an overview of the required general approach to the water crisis:

New Perspectives on the Western Water Crisis

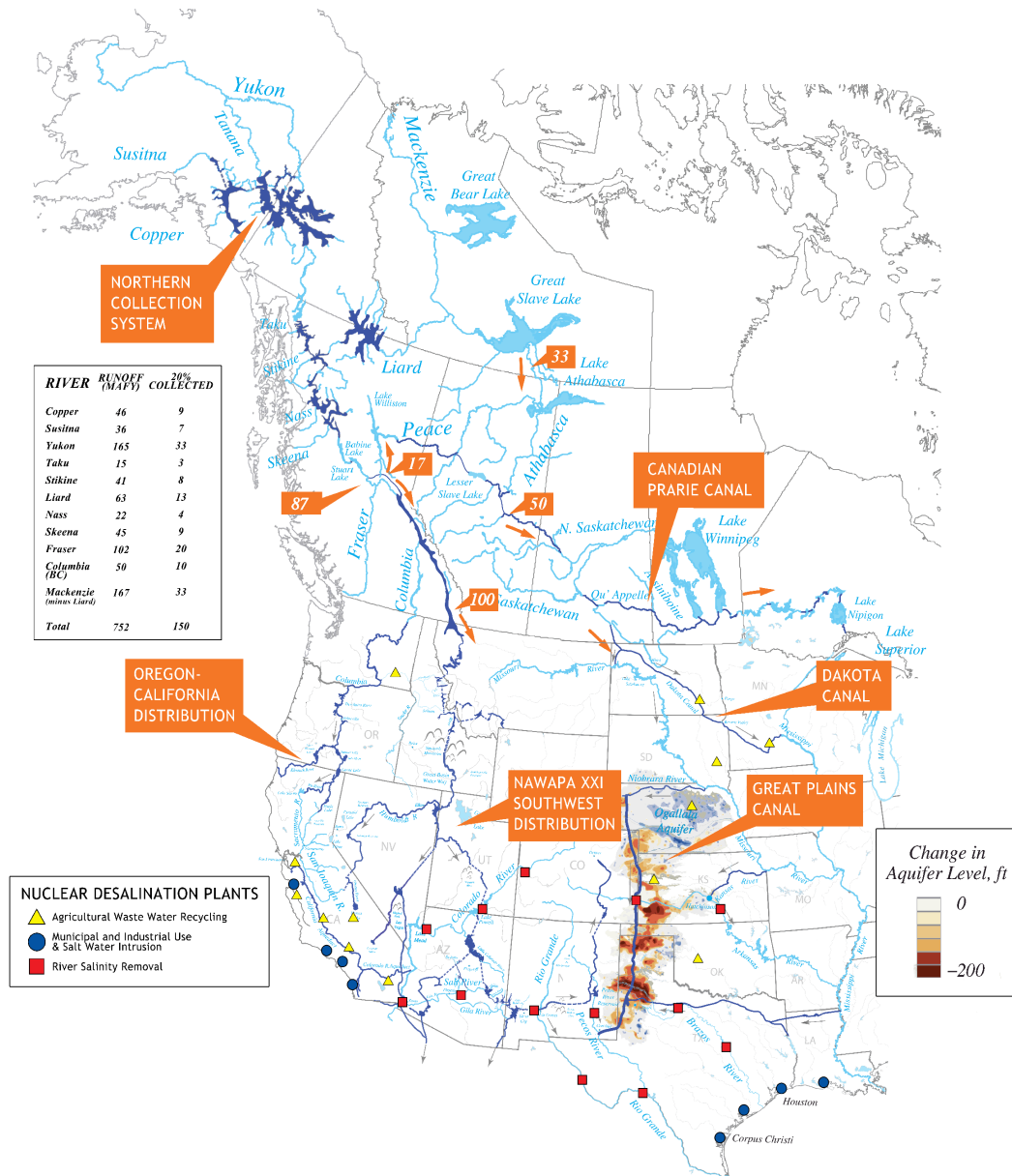
<https://larouchepac.com/20150401/new-perspectives-western-water-crisis>

Two projects of the President John Kennedy administration were designed to be completed in the 1990s, about the time the California State Water Project reached its limit of providing the water the state required. Here, I'll just give a quick outline of those projects and attach several links for those willing to make the effort to understand what has been lost.

First was the *North American Water and Power Alliance (NAWAPA)*. Originally designed by the Parsons Engineering Company of Pasadena, this project was the next step up in water management from what had already been accomplished. Through the first half of the 20th Century water projects and

water management systems first created systems based on a single river, then later, as in the California water management system, a region-wide system based on multiple rivers and their tributaries.

NAWAPA was, and could be yet, a continent spanning water management system, extending from Alaska to Mexico, from the Atlantic to the Pacific. Tapping into the northern waters of Alaska and northern Canada, hundreds of individual projects would manage the continent's water, moving water from where it was abundant to where it was needed.



The updated NAWAPA XXI map showing the collection area, transfer system, and distribution region, with locations of planned desalination plants from JFK's Desalination task force.

The following links provide a detailed picture of the project, both as originally conceived, and as updated for today by *LaRouche PAC*:

NAWA PA XXI: LaRouchePAC Special Report

http://archive.larouhepac.com/files/20120403-nawapaxxi-forweb_0.pdf

Special Report: Nuclear NAWAPA XXI: Gateway to the Fusion Economy

http://21stcenturysciencetech.com/Nuclear_NAWAPA_XXI/Nuclear_NAWAPA_sm.pdf

Drought: The Time for NAWAPA has Come (video)

March 3, 2014

<http://archive.larouhepac.com/node/30047>

NAWAPA and Biospheric Engineering (video)

November 17, 2010

<http://archive.larouhepac.com/node/16500>

NAWAPA XXI - Oregon-California Extension (video)

<https://www.youtube.com/watch?v=2ZTft0pJUUM>

NAWAPA 1964 -- Feature Film

<https://www.youtube.com/watch?v=c0QS9AaMfvY>

The second policy of the John Kennedy administration was the building of nuclear-powered desalination plants on the coasts of California and Texas. Initiated by the President, the commission he created continued work after he had been assassinated. And in the fall of 1966, the U.S. Congress passed legislation to build a massive nuclear-power-desalination plant off the coast of Orange County, California. Had that authorized program been acted upon in subsequent years the present water crisis in the state would not exist today. The members of Congress who pushed through that legislation understood that while the then under construction California State Water Project would begin delivering water in 1972, that by 1990, new sources of water would be required to meet the needs of the state's growing population.

Here is the link to an extensive report on the nuclear-power-desalination program:

<http://www.californiadroughtupdate.org/2015/05/29/nuclear-powered-desalination-in-california-parts-i-iv/>

Meanwhile, a faint echo of what was nearly underway 50 years ago, was recently heard as the first large-scale desalination plant, producing 50 millions of water per day, went into operation in December of last year at Carlsbad. Yet, after a couple of days of press coverage, the Carlsbad plant disappeared from the discussion. It is true that a similar plant is slowly moving forward to be built at Huntington Beach, but, again, it is not part of the discussion, argument or "controversy" of a serious and responsible long-term plan for the California water management system.

Desalination requires a large amount of electricity, and whereas the Carlsbad plant and the maybe Huntington Beach plant will tap into natural gas generators, today there is not even an adequate electricity supply generated in the state for any expansion. In fact, despite Jerry Brown and his "alternative fuels," California, for the past five years has had to increase electricity production from natural gas plants, not only to meet increased demand, but also to replace the 10 percent of the state's electricity production that has been lost as hydroelectric power production has declined due to the drought. Thus, accompanying the proposal immediately below must be a fight by the nation to begin

once again building nuclear power plants. While the fools of the environmentalist outlook have made nuclear a dirty word for two generations of Americans and Europeans, the rest of the world, led by China, Russia and India, is building dozens of new nuclear power plants.

What I have repeatedly proposed, is, that two or three dozen Carlsbad-sized desalination plants be built in California over the next five years or so, with maybe half-dozen located in the Bay to pump directly into the aqueducts of the Central Valley Project and the State Water Project. Last week this report had a chart demonstrating that even in non-drought years, water contractors have received as little as 20 percent of the water they have contracted for since 1992. So, even if this drought ends, California cannot presently meet all its water needs.

The water crisis has been declared an emergency by the Governor, so let's act like it is an emergency. The Carlsbad plant took two years for construction, and by putting the construction schedule on a seven day per week/ 24 hour per day schedule, new plants can be completed in less than one year. Rivers of water pouring out of the Ocean and the Bay will not only ensure an ending of the water crisis, but will have transformed the entire economy back to one of production, while putting a few hundred thousand people to work on that which is useful.

Concluding this section, here is an example of the kind of leadership that thought and acted as we must once again think and act:

JFK Speeches Toward a Nation Wide TVA

<https://www.youtube.com/watch?v=TP8xpevILNE>

LaRouchePAC presents, in the memory of JFK, six of his speeches from 1962 and 1963 on the subject of national resources. In this period of national amnesia, and on the eve of general war to which our nation is being dragged by this same amnesia, remember our last expression of national pride, John F. Kennedy; remember through these films a legacy which is your own, even if you are unaware of that fact.

In contrast, an article purporting to present a policy debate on creating new water supplies for the state in the *Sacramento Bee* of February 4, "Dan Walters: Debate over new supplies is microcosm of state's water war," merely restates the same endless debate over conservation vs. building new storage facilities, with an afterthought mention of desalination.

<http://www.sacbee.com/news/politics-government/dan-walters/article58555808.html>

What Has Happened To El Nino?

Or, as the San Francisco Chronicle put it on February 10, "El Niño takes a siesta: When will the rain return?," by Kurtis Alexander.

<http://www.sfchronicle.com/bayarea/article/El-Ni-o-takes-a-siesta-When-will-the-rain-6819006.php>

A few excerpts:

February wasn't supposed to be like this.

Winter held promise of biblical rains, driven by a strong El Niño that would relieve California of its

crushing drought. Instead, it has barely rained a drop this month, record heat has descended on the Bay Area, and there's no sign of a storm anytime soon.

"It's half of February that's on track to be dry. This is not what you want to see if you're trying to have a wetter-than-average winter and spring and reinvigorate the hydrology," said Mike Anderson, state climatologist with California's Department of Water Resources. "This is much different than what we've seen in past El Niño events."

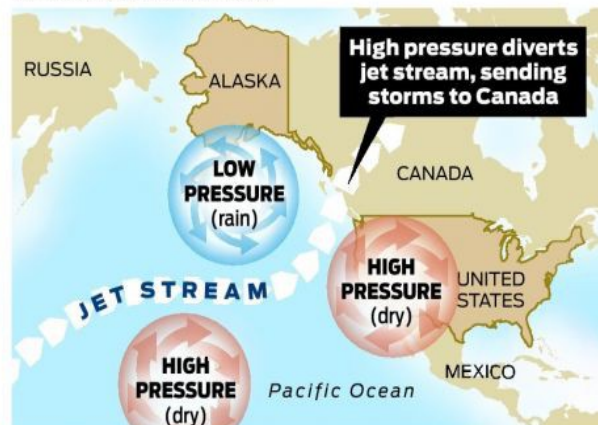
Anderson and other climate experts caution that it's too soon to call this year's El Niño a bust. Even California's wettest winters have had prolonged dry periods, and the nearly two months that remain in the rainy season could still deliver.

Storms off track

TYPICAL EL NIÑO PATTERN



CURRENT PATTERN



This high-pressure pattern has been common during the drought. However, El Niño had its characteristic effect of pushing the storm track southward and ensuring California a healthy dose of rain — at least until this month.

The storm track is now pushing storms toward Canada.

"It definitely brings us back to what we saw during the past four years, and it's not what you want to see during one of your three wettest months," Anderson said.

For comparison, the longest dry spell in February 1998, during an El Niño winter that wreaked havoc on California, was just three days, according to the National Weather Service. The longest rainless period in February during the monster 1982-83 El Niño was four days.

And from NASA, on February 10, a short bulletin on El Niño expresses both worry that El Niño is fading away, and the hope that it is not. Some quotes from the article follow.

<http://climate.nasa.gov/news/2397/>

The large and powerful El Niño in the eastern tropical Pacific has yet to deliver torrential rains to Southern California—an almost daily problem for Bill Patzert, the Jet Propulsion Laboratory's quotable oceanographer.

"No matter where I go—whether it's JPL or Whole Foods or talking with reporters—everybody has a simple question: Show me the rain," Patzert says.

But it might just be a case of expectations outrunning El Niño itself.

While El Niño has delivered some rain, improving California's vital snow pack, the Pacific phenomenon's late peak could mean that heavier downpours are only weeks away.

"Historically, El Nino has put on the big show in February and March," Patzert said.

Still, predicting El Niño's behavior is always a tricky business.

"By late February, I'll be nervous if something hasn't happened," he said.

Finally, for this section, California is experiencing record temperatures this week. As reported by wxshift.com on February 5, "Hot, Dry Weather is About to Return to California. That's Bad News For Snowpack," all that snow that fell in January is in danger of melting.

<http://wxshift.com/news/heat-and-dry-weather-are-about-to-return-to-california>

The article includes this quote: "[Peter Gleick](#), a climate expert at the Pacific Institute, warned that seven days of sustained warmth could melt as much as 30 percent of California's snowpack."

The Drought Monitor and the Reservoirs

The excruciatingly slow relief from the drought continues to be noted by the U.S. Drought Monitor. In the past week the portion of the state in Exceptional Drought declined by one point, down to 38.48 percent. Just to remind everyone once again, until 2014 not even one percent of the state had ever been in Exceptional Drought.

When we look at the reservoirs we see an interesting pattern. The larger northern California reservoirs have, over the past few weeks, been filling up nicely, but the central and southern ones remain well below normal for this time of the year. Shasta is now at 80 percent of normal, while Folsom is actually above normal, though still only at 62 percent of capacity. In central California, New Melones, a major reservoir, remains at 29 percent of normal and the San Luis Reservoir is at 45 percent of normal. San Luis, an off-stream reservoir, is filled entirely by pumping from the Delta, which as we have reported, has been unconsciously held back to protect some fish.



***Shasta Dam and Reservoir, February, 2016
It looks better, but still needs another 200 million-acre-feet.***

Drought Dries Up Hydro Power

As mentioned above, the drought has had a dramatic impact on hydroelectric power production in the state. Not only has hydro power as a percentage of California's electricity production fallen from 18 percent to 7 percent, but it has been replaced by that produced by burning more natural gas. Jerry and his Brownshirts must be chewing the rug as carbon dioxide emissions increased by 23 million tons, or 10 percent, during the past four years. In addition, it has cost ratepayers in the state an extra \$2 billion.

A new study reported on in *sfgate.com* on February 9, cites a new study on the state's electricity which includes these statistics. Here are a few excerpts.

<http://www.sfgate.com/business/article/How-the-drought-boosts-your-utility-bills-and-6818419.php>

By starving California's hydroelectric dams of water, the state's four-year drought has cost consumers an extra \$2 billion in utility bills and pushed up greenhouse gas emissions from power plants by 10 percent, [a new study](#) finds.

Researchers at the [Pacific Institute](#) think tank examined the drought's [impact on electricity generation](#) in California over four years, ending last September.

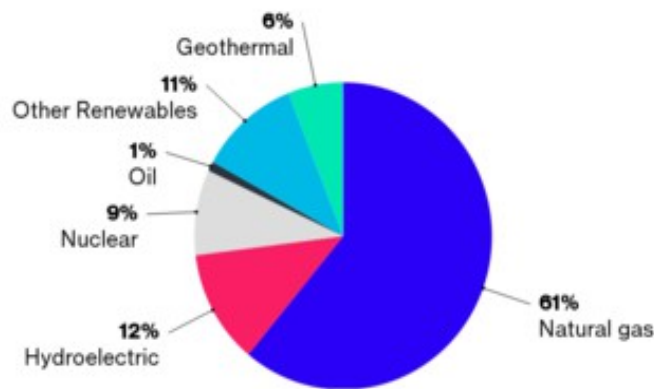
As the Sierra snowpack shrank to record lows, the cheap electricity generated by dams in the foothills fell. Utilities had to buy more expensive replacement electricity from power plants burning natural gas. Californians' monthly bills rose. So did emissions.

Hydropower used to be a cornerstone of the state's energy mix. From 1983 to 2013, dams produced on average 18 percent of the electricity generated in the state. But during the last "water year," which ended in September, that share slipped to 7 percent, according to the report.

In another article, this one from *Bloomberg*, "California's Four-Year Drought Cost \$2 Billion on Power Bills," includes the chart below, providing a good picture of the sources of the state's power production. <http://www.bloomberg.com/news/articles/2016-02-10/california-s-four-year-drought-cost-2-billion-on-power-bills>

Where California's Power Comes From

Hydroelectric was the second largest source of electricity in 2013



Source: California Energy Commission

Bloomberg

Remember East Porterville?

A no better demonstration of the Brown administration's ugly policies is seen in East Porterville. More than two years ago as a few hundred homes' wells went dry in this poor community, water began to be trucked in, water tanks installed in yards and a public shower set up in a church parking lot. Back then this was a big story. Nothing has changed in East Porterville since.

An article, "Drought relief elusive" in the *Porterville Record* on February 6 covering a State Legislative Analysis report, in sterile language, is enough to make you sick. These people have not had running water in their homes for more than two years, and the state government won't hook these homes to the Porterville City water supply. Excerpts follow.

http://www.recorderonline.com/news/drought-relief-elusive/article_e747e22c-cc9a-11e5-9aac-83afc4052d81.html

No answers for East Porterville

A state analysis warns that some sectors hit hardest by California's drought may not see relief this year.

A report released Friday by the nonpartisan Legislative Analyst's Office (LAO) singles out Central Valley communities, including those in Tulare County, that will need years of state assistance getting new sources of drinking water, after drought and overuse dried local wells.

The rural area of East Porterville has become ground zero for the drought. Families there began seeing their wells go dry two years ago or more. Many families have had large tanks installed to supply them with water, but must still use water sparingly in order to stretch the supply.

Also, the state paid for a new well in Porterville, but changed plans at the last minute. Instead of hooking that well up to the city's water system, which in turn would set up a filling station for trucks hauling water to the tanks and also hook up more than 100 residents in East Porterville, the state is making the well only a filling station. The county just approved spending \$400,000 for that conversion. However, connecting the 100 homes to the city's water system is on hold.

It noted that many dry wells, including 1,130 in Tulare County as of December, have yet to be addressed.

"The impacts of these water shortages have compounded other challenges in some effected communities. Many of the areas where wells have gone dry were economically disadvantaged before the drought. Additionally, because many rural communities — particularly in the Central Valley — are home to large populations of agricultural sector employees, drought-idled farm fields have led to higher unemployment and lost incomes in these areas," said the LAO.

As is well-known, the Central Valley's unemployment rate is much higher than the rest of the state. And, as undercounted as the official unemployment rate report is, here are some figures for the both the Central Valley and the Imperial Valley: Bakersfield at 10.2%, El Centro at 19.6%, Fresno at 10.3%, Hansford at 10.3%, Merced at 10.3%, Madera at 10.1%, and Salinas at 10.4%.

Another story focus on the Imperial Valley and the conditions thousands of farm workers are enduring. *Pri.org's* story, "Why are kids going hungry in one of California's most productive farming regions?," was published on January 28, written by Sonia Narang. Excerpts follow.

<http://www.pri.org/stories/2016-01-28/why-are-kids-going-hungry-one-california-s-most-productive-farming-regions>

...Imperial Valley, a largely rural county in southeastern California that borders Mexico. The area is historically one of the most productive farm regions in the nation, ranking in the top 10 percent of all agricultural sales in the US.

That makes the next statistic even more startling: the percentage of children going hungry in Imperial Valley ranks among the worst 10 percent of all US counties.

Imperial County has the highest rate of child hunger in the entire state of California, with close to 40 percent of kids not getting enough food. The majority of the county —more than 80 percent —is Hispanic.

Persistently low wages, unstable employment and severe drought conditions have taken a major toll on local agricultural workers and their families. And, that's hitting young people the hardest.

\$10 (Canadian) for Cauliflower-- the Drought to Blame?

Here is an economics lesson. As widely reported throughout Canada, shoppers have been shocked in their visit to the produce section of the supermarket. A head for cauliflower now costs \$10.00. While some of our neighbors up north have assigned some blame to the California drought, the real story is the global financial and economic collapse. As oil prices began falling more than one year ago, tens of thousands of oil workers in the shale fields of Manitoba and Saskatchewan were thrown out of work, and both Federal and Provincial tax revenues collapsed. The weakening Canadian economy produced a fall in the value of the Canadian dollar relative to the U.S. dollar-- it is now worth about 35 percent less. So, the prices Canadians pay for US imports have risen by that amount, or more.

But, perhaps there is something to the claim that the drought has helped to drive up the price of cauliflower. An article in the California-based Business Journal on February 5, "Drought-Caused Vegetable Price Fluctuations Tough to Swallow," provides some back-up to the claim.

<http://www.labusinessjournal.com/news/2016/feb/05/drought-caused-vegetable-price-fluctuations-tough-/>

It's been a wild season in the winter produce market dominated by California growers, who are responsible for 90 percent of the country's many winter vegetables, the Los Angeles Times noted in a report tied to California vegetables' role in filling Super Bowl snack spreads.

Drought followed by the rains of El Niño, and heat followed by cold snaps created a cauliflower price boom that now has turned to a bust, growers and industry experts say. Carrots, broccoli, lettuce, green onions, and even strawberries were also subject to price swings.

The End of the Report for This Week