California Drought Update



For October 13, 2016 by Patrick Ruckert

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A Note To Readers

Last week's report and the one you are now reading have both seem to get out of control as I put them together. Fourteen pages long! On the drought!? Yes, I know, a little too much. Next week, I promise, the report will be a more appropriate length the topic deserves. So, why so long?, you may ask. The only excuse I can give is that the drought, like anything else in the real world, is a part of that world, and to understand the part, we must understand the world.

As we slosh our way through the disgusting filth of the last few weeks of the X-rated Presidential campaign, perhaps the following may inform and amuse you. Even this is much better than wallowing in what most media are dominated by today.

The most important part of this week's report is the final section on economics, contrasting the pains and insanity the economy gives us today to what are policy must be.

It is suppose to rain today and for a couple days more in California, though a few days of rain won't make up for six years of drought, and anyway the very dry soil will just suck it all up.

Then we have some reports on the water supply, with, surprise, the southern part of the state in a better condition than it has been at any time over the past three years.

Last week I reported that the entire California water management system is coming apart. Nothing over the last week changes my outlook on that. A couple of developments this past week in regard to the Bay-Delta Plan and in southern California provide more evidence.

The usual "sky is falling" hysteria about climate change added a new culprit this week-- the dams. It is claimed that water just sitting behind a dam is emitting "polluting carbon" into the atmosphere and adding to global warming. We humans, if you believe these people, just can't seem to do anything right. A report on that study and more you will find down the page a ways.

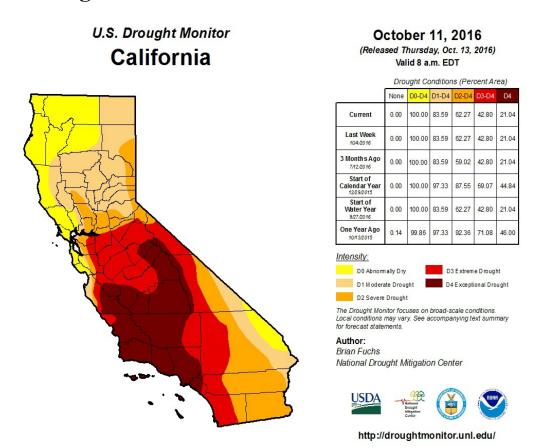
Further down the page is a section called, "The Damage," reporting on lost income, wells going dry, and the shocking report that "among people engaged in agriculture (farmers, ranchers, farm laborers, fishers, and lumber harvesters)" the suicide rate "was the highest among 30 national Standard Occupational Classification groups...."

The nearly 50,000 suicides per year and 47,000 overdose deaths from drugs each year in the U.S., the next report on the structure of the labor force increasingly dominated by part-time employment and waiters and bartenders provides some insight into the why of such a terrible picture.

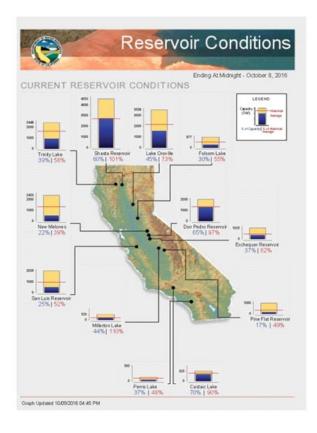
This week's report concludes with two items on what must be the U.S. policy. First the Kansas Cattlemen's Association is promoting a return to the Glass-Steagall banking law. Second we have an article on "Economics Isn't About Money," by Jason Ross of the LaRouche PAC Science Team.

If you get through all of this, let me know.

The U.S. Drought Monitor



The Reservoirs



The Weather, the Drought and What Is To Come

Beginning today at least northern California will get some rain. It is that time of the year when such things sometimes happen. What does it mean for the rest of the winter? Ask the weatherman; sometimes he, or she, get it right.

Three items discuss the topic. I have highlighted a few sentences in them. First, from the *Sacramento Bee* on October 11, "Northern California will get a soaking, but will it ease the drought?:"

http://www.sacbee.com/news/state/california/water-and-drought/article107638927.html

By Ryan Sabalow

A pair of warm storms expected to hit Northern California later this week could dump more than 8 inches of rain in the mountains and have North Coast rivers roaring.

But weather forecasters and hydrologists say the first substantial storms of California's rainy season are unlikely to put much of a dent in the state's water-supply woes, nor will they bring much risk of flooding to the parched Sacramento Valley.

The second is from *weathewest.com*, which provides a little more detail and background:

Impressive early-season atmospheric river in NorCal & Pacific Northwest; some early thoughts on coming rainy season

by Daniel Swain on October 11, 2016

http://www.weatherwest.com/archives/4305

Remnants of Typhoon Songda to bring powerful Pacific NW storm

Northern California will probably see some hefty rainfall accumulations over the next 7 days as a series of storms take aim at the west coast. While the heaviest rainfall and strongest winds with the upcoming storm series will be focused at the Pacific Northwest, the northern third of California will experience periods of intense precipitation and strong winds through the next 5-7 days. In fact, a very impressive atmospheric river associated with the remnant moisture plume from Songda will extend clear across the Pacific Ocean by Thursday. Recent atmospheric model forecasts suggest that the amount of atmospheric water vapor transport during that portion of the event could exceed record values for the month of October over most of NorCal—a striking statistic, although it's worth noting that October records are considerably lower than those during our peak rainy season from November-March. Moderate to heavy rainfall may occur as far south as the Bay Area, and light rainfall somewhat further south than that. There is a chance of some light rain in southern California, but at the moment it does not appear that areas from Los Angeles southward will see appreciable rainfall.

The third article, from the *San Francisco Chronicle*, is of more interest. Again I have highlighted a few sentences:

Don't expect much snow from the soaking storm approaching California

http://www.sfgate.com/weather/article/California-reservoirs-will-get-a-boost-from-9967683.php

by Kristin Hanes

Thursday, October 13, 2016

California has been trying to fill its reservoirs for 5 years, and it will get a little help from a <u>storm</u> <u>expected to hit</u> later this week. Right now, Lake Shasta is only at 60% capacity and Lake Oroville is at 44%, with other reservoirs across the state even lower.

"So, there's plenty of room in our reservoirs to accommodate runoff from the storms expected to arrive this weekend," says Doug Carlson with the Department of Water Resources. "But really, the ground has become so dry that much of the rainfall is expected to be soaked up like a dry sponge."

The storm isn't expected to do anything for the state's snowpack, with just an inch forecasted to fall in the Sierra from this warm system. "The real snow season becomes evident around December, and we do our first of five major snow surveys around the 1st of January. We'll know by the time January is over, or maybe through February, whether we're having a wet or a dry winter. So, we'll have to wait a few more months to see if we're in the 6th year of a drought."

California sees most of its precipitation in the months of December, January and February. And while this mid-October storm may seem to pack a punch, especially in Northwestern California, the month isn't off to a great start, says Carlson. "We're only at 30% of the average amount of rainfall from October 1st through 12th. We're at 0% in the central San Joaquin valley, and 0% in the Tulare Basin in Southern California. We're already starting off on the wrong foot, and we're hoping these storms take care of some of that deficit, at least in the north. We're not expecting anything south of the Bay area."

Central Valley Project Storage Better Than One Year Ago

The following, from the *U. S. Bureau of Reclamation*, must be put in the context of the project cutting off the largest water district in the country by 95 percent of its contracted amount of water this year. This is reported from *mavensnotebook.com* on October 10:

Central Valley Project begins water year 2017 with 4.9 million acre-feet of storage

https://mavensnotebook.com/2016/10/07/this-just-in-central-valley-project-begins-water-year-2017-with-4-9-million-acre-feet-of-storage/

From the U. S. Bureau of Reclamation:

The Bureau of Reclamation's Central Valley Project (CVP) began water year 2017, which runs from Oct. 1, 2016, to Sept. 30, 2017, with 4.9 million acre-feet of water in six key CVP reservoirs (Shasta, Trinity, Folsom, New Melones and Millerton reservoirs and the federal share of the joint federal/state San Luis Reservoir). This is 82 percent of the 15-year average annual carryover of 6.0 million acrefeet and 2 million acre-feet more than the amount with which the Mid-Pacific Region began WY 2016 on Oct. 1, 2015.

he CVP is the largest single source of irrigation water in the state, typically supplying water to about 3 million acres of agricultural land in the San Joaquin and Sacramento valleys and along California's central coast. The CVP also provides urban water for millions of people and industrial water essential to the San Francisco Bay Area's economy. Water from the CVP is also crucial for the environment, wildlife and fishery restoration, and hydroelectric power production.

I Thought Southern California Was About To Run Out of Water

Nearly two years ago the forecast was that southern California only had a one year supply of water. Now, after two more years of drought the Metropolitan Water District of Southern California says all is well and we have enough water for five years. What happened or did not happen is discussed in the following from the *Riverside Press Enterprise* on October 10, written by Steve Scauzillo:

Metropolitan Water District says no emergency exists

Outcome of current water year dependent on rain and other variables. http://www.pe.com/articles/water-815527-california-years.html

Despite five years of drought, record-setting heat and water being diverted to protect the state's native fish population, Southern California's top urban water agency said Monday that it has enough water stored for nearly five years.

"That is pretty good," said Jeff Kightlinger, general manager of the Metropolitan Water District of Southern California, during a news conference at its Los Angeles headquarters. "Demand is down and supply is up. We've added to our drought resiliency even in the middle of a drought."

The district, which supplies 19 million Southern Californians, was able to acquire more water from Northern California this year due to plentiful rain and snow there, he said. Also, conservation that reduced consumption between 23 percent and 27 percent from June 2015 to June 2016 has decreased demand at the end of the State Water Project pipeline, which supplies one-third of the state's usage.

We've had the driest five years in a row in 120 years and only two of the past eight years produced

normal rainfall for California, Kightlinger said.

The good news is that conservation has reduced demand. Since June 2015, Californians have saved 2 million acre-feet, or about the amount of water used by 10 million people in one year, according to the State Water Resources Control Board.

Some more detail is in an article by Emily Guerin from *KPCC radio* on October 10, who also makes the point that short-term thinking about water may get you in trouble.

Southern California has more water than expected

http://www.scpr.org/news/2016/10/10/65519/southern-california-has-more-water-than-expected/

Finally, some good news about California water. For the first time in four years, the largest water wholesaler in Southern California is putting water back into storage instead of taking it out. That puts the Metropolitan Water District, which supplies water to 19 million people in Southern California, in a good position heading into 2017.

Given that most of Southern California is still in exceptional drought, how is this possible?

First, we need to understand where MWD's water comes from and what it does. As a wholesaler, MWD's job is to import water and sell it to local water agencies like the Los Angeles Department of Water and Power, which sell it to us. MWD gets its water from two places: the Colorado River and Northern California.

This year, MWD received more water from Northern California than the previous three years combined -- 60% of what it requested.

MWD's customers, in turn, didn't use all that water. That left 130 billion gallons – enough for around 800,000 homes – left over to add to storage reservoirs like Diamond Valley Lake.

While the short-term outlook for MWD is better than in recent years, agency officials worry about long-term threats to supply. The Colorado River watershed is entering is 16th year of drought, and states that depend on the river have begun negotiating how to share the pain.

Meanwhile, water supplies from Northern California aren't looking good, either. In the past few years, MWD has received only a fraction of what it's requested from the State Water Project (60% in 2016, 20% in 2015 and just 5% in 2014), and the agency expects that unreliability to continue into the future.

More Signs of Trouble for the Governor's Tunnels

My theme last week was that the entire structure of the California water management system is beginning to come apart. Within the Metropolitan Water District of Southern California things seem to be beginning to fray. I'll just include here the link to and the first sentence of the *Orange County Register* article of October 12:

Angry words over unanswered questions on California tunnels

http://www.ocregister.com/articles/water-731843-tunnels-metropolitan.html

Tensions over unanswered questions on how California's largest water district might help pay for two

proposed giant water tunnels boiled over into cursing at a meeting of the water district's board members.

And More Tension From the Bay-Delta Plan

The state water board's newly released draft update to the <u>Bay-Delta Plan</u> of diverting less water to increase the flow on the Stanislaus, Tuolumne and Merced rivers in the range of 30 to 50 percent of unimpaired flow from February to June even has San Francisco up in arms. For full background coverage see last week's report: http://www.californiadroughtupdate.org/pdf/20161006-California-Drought-Update.pdf

The San Francisco Chronicle on October 7 had two articles. Excerpts follow.

The first, immediately below, it should be noted, is by Spreck Rosekrans, who is executive director of Restore Hetch Hetchy. His organization wants to tear down the dam that created the Hetch Hetchy Reservoir.

San Francisco's turn to cut back water use to help fish

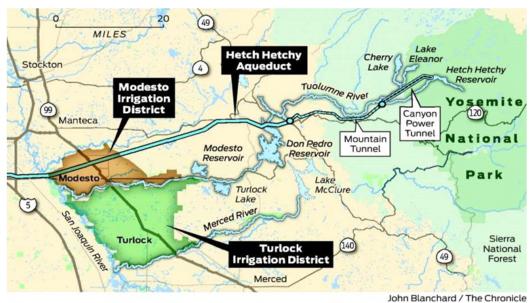
By Spreck Rosekrans

October 7, 2016

http://www.sfchronicle.com/opinion/article/San-Francisco-s-turn-to-cut-back-water-use-to-9955061.php

Declaring that "the Bay-Delta is in ecological crisis," the state water board has proposed leaving 40 percent of the natural flow of these rivers untouched. Water agencies will either have to develop new supplies or make do with less, especially in dry years when water supplies are at a premium.

San Francisco derives 85 percent of its supply from the largest of these rivers, the Tuolumne. The city and county of San Francisco operates three reservoirs in the upper watershed, including the controversial Hetch Hetchy Reservoir in Yosemite National Park. San Francisco itself uses only one-third of this supply, and sells the rest to other Bay Area communities.



Here is the second article:

San Francisco to state on water-use cutbacks: How low can we go?

By Harlan L. Kelly Jr. and Nicole Sandkulla

http://www.sfchronicle.com/opinion/article/San-Francisco-to-state-on-water-use-cutbacks-How-9940351.php

The San Francisco Public Utilities Commission is the retail water provider for San Francisco and the water provider for 26 wholesale customers in San Mateo, Santa Clara and Alameda counties. Today, 85 percent of the water we deliver to our customers comes from the Tuolumne River. The state water board's newly released draft update to the Bay-Delta Plan to balance California water uses — drinking, irrigation and fisheries — has potentially serious effects for the 2.6 million people who rely on our water system. It recommends diverting less water to increase the flow on the Stanislaus, Tuolumne and Merced rivers in the range of 30 to 50 percent of unimpaired flow from February to June.

Essentially, this would mean that we can't divert or store as much water in Hetch Hetchy Reservoir as we do now. Based on our modeling of the previous proposal, at 35 percent of unimpaired flow, the San Francisco Public Utilities Commission would have to impose water rationing of 42 to 52 percent for a situation like the 1987-92 drought, the worst on record.

We can't conserve our way out of this. Water is our lifeblood. The consequences of these cutbacks potentially could cripple our Bay Area economy. Our initial economic analysis of the first iteration of this plan forecast up to 51 percent rationing, resulting in 140,000 to 188,000 jobs lost in the Bay Area. These same forecasts also show between \$37 billion and \$49 billion in decreased sales transactions.

Harlan L. Kelly Jr. is the general manager of the San Francisco Public Utilities Commission and Nicole Sandkulla is the CEO and general manager of the Bay Area Water Supply & Conservation Agency. To comment, submit your letter to the editor at http:bit.ly/SFChronicleletters

More on "Shutting Down Central Valley Agriculture

In last week's report I ran excerpts from this commentary in the *Modesto Bee* by Lance W. Johnson, who is a retired water resources engineer living at Shaver Lake. He worked on Central Valley and San Joaquin Valley water fishery and water rights, including as a water agency general manager. Johnson argued that the intent of the environmentalists is to shut down Central Valley Agriculture. Here is the link to his commentary:

Learn from history ... fight to keep your water

By Lance W. Johnson

http://www.modbee.com/opinion/state-issues/article105182121.html

His commentary was answered on October 5 by Gary Bobker, who works with the San Francisco-based Bay Institute and served as chair of the CALFED Program Ecosystem Roundtable. Bobker "pays homage" to California agriculture and then argues all the usual points that will shut down a substantial part of that activity. You can read his commentary in the link below.

Do environmentalists really want to destroy Valley farms? No

By Gary Bobker

http://www.modbee.com/opinion/state-issues/article106162677.html

I was surprised to read in the op-ed by Lance Johnson ("Learn from history; fight to hold onto your water," Oct. 2, Page 1D) that he learned from me and other conservationists that our secret agenda was to bring an end to Central Valley agriculture.

That's simply untrue.

The Sky Is Falling

At least that is what one would think after reading the array of articles blaming everything from the drought, to the destruction of the Delta, to more and bigger forest fires, and to dams emitting "carbon pollution" to "man-caused" global warming. If you like you can read some of this from the links provided with the headlines.

1) SF Bay ecosystem collapsing as rivers diverted, scientists report

By Carolyn Lochhead

http://www.sfgate.com/news/article/SF-Bay-ecosystem-collapsing-as-rivers-diverted-9953776.php

October 8, 2016

The Chronicle

2) If we want to protect the Southwest's water, we can no longer ignore climate change.

10/07/2016

http://www.huffingtonpost.com/entry/megadrought-risk-climate-change_us_57f7b124e4b0b6a430318a03

Joseph Erbentraut Senior Reporter, The Huffington Post

3) Forest fires have doubled in West due to climate change, study finds

http://www.eastbaytimes.com/2016/10/10/new-study-forest-fires-have-doubled-in-west-due-to-climate-change/

By Paul Rogers October 10, 2016

4) Northwest Researchers Link Carbon Pollution To Hydro-Dams

By editor September 28

The Damage

The drought and the suicidal economic policy of the nation continues to wreck the economy and the lives of millions. In this section we provide some examples of both.

First this report from farmandranchguide.com from August 5, by Michael Rosmann, PhD, "Suicide rate of farmers higher than any other group."

http://www.farmandranchguide.com/entertainment/country_living/farm_and_ranch_life/suicide-rate-of-farmers-higher-than-any-other-group/article_e1ee8bfc-5b13-11e6-a1cc-cfffc7592815.html

The Centers for Disease Control and Prevention (CDC) issued a report on July 7, 2016, that indicated the suicide rate among people engaged in agriculture (farmers, ranchers, farm laborers, fishers, and lumber harvesters) was the highest among 30 national Standard Occupational Classification groups, at 84.5 per 100,000 persons in 2012. The study examined 12,312 deaths during 2012 in 17 states that were recorded by the National Violent Death Reporting System as suicides.

Then, to revisit a story we have reported on several times—the dry wells of East Porterville, California. For more than two years hundreds of people have been without running water in their homes. Now, finally, some of them are being hooked up to the Porterville system, but in the outlying areas of Tulare County wells continue to run dry. The *Porterville Record* reports on this on October 8:

Hundreds still without water

http://www.recorderonline.com/news/hundreds-still-without-water/article_653a4e74-8d14-11e6-9ad7-1f5c12e1880b.html
By RICK ELKINS

Forgotten families have few solutions

As the state begins installing water lines throughout East Porterville to end the misery for hundreds of families whose wells have gone dry, hundreds more of the "forgotten families" of Tulare County still must endure no running water in their homes.

East Porterville became the poster child of California's drought because of the concentration of wells which have failed, but just as serious are the hundreds of other wells which have failed throughout the county. For those families, there is no help on the way.

He is one of more than 600 residents in Tulare County who is without water and a solution, even a temporary solution. Andrew Lockman, director of the county's Office of Emergency Services, said at of the end of September, the county had seen 1,632 wells go bad in the past three years. Of those, 673 have had some sort of a solution and 332 have had a well dug or been connected to a permanent water source.

He said the county is still spending about a half a million dollars a month to deliver water, more than half of that spent in East Porterville where work has begun to hook up all residents to the City of Porterville's water system. Add in the bottled water and the portable showers and the county is spending closer to \$600,000 a month on drought relief.

Capital Public Radio had this report on the financial losses to agriculture in San Joaquin County on October 6:

San Joaquin County Reports Half Billion Dollars Loss In Agricultural Production

By Rich Ibarr

http://www.capradio.org/articles/2016/10/06/san-joaquin-county-reports-half-billion-dollars-loss-in-agricultural-production/

More than half a billion dollars...that's how much San Joaquin County lost in farm production last year. The drought and lower prices were to blame.

Now for a couple of items demonstrating the destructive insanity of the U.S. economy and financial system. A healthy productive economy will be dominated by productive employment in manufacturing, construction, mining, farming and essential non-productive jobs in health, education, and necessary public employment. For decades now, the U.S. economy has not only been destroying this required employment orientation, but the trend keeps accelerating. The following is from *zerohedge.com* on October 7. Excerpts follow.

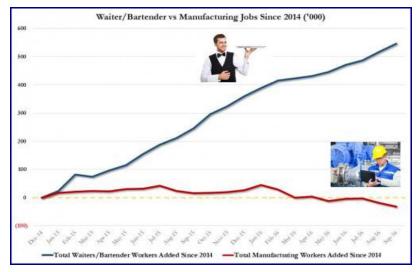
Since 2014 The US Has Added 547,000 Waiters And Bartenders And Lost 32,000 Manufacturing Workers

by Tyler Durden

http://www.zerohedge.com/news/2016-10-07/2014-us-has-added-547000-waiters-and-bartenders-and-lost-32000-manufacturing-workers

As another month passes, the great schism inside the American labor force get wider. We are referring to the unprecedented divergence between the total number of high-paying manufacturing jobs, and minimum-wage food service and drinking places jobs, also known as waiters and bartenders. In September, according to the BLS, while the number of people employed by "food services and drinking places" rose by another 30,000, the US workforce lost another 13,000 manufacturing workers.

The chart below puts this in context: since 2014, the US had added 547,000 waiters and bartenders, and has lost 32,000 manufacturing workers.



Another article from *zerohedge.com* on October 7, focuses on another element of the destructive economic policy that has turned the U.S. economy from a productive, science-driven, infrastructure building one into a gambling casino, with a huge portion of the workforce forced to work two or more jobs just to survive. Excerpts follow.

Part-Time Jobs Soar By 430,000 As Multiple Jobholders Surge To August 2008 Levels

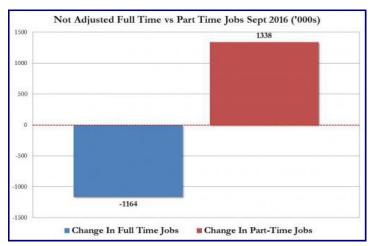
by Tyler Durden

http://www.zerohedge.com/news/2016-10-07/part-time-jobs-soar-430000-multiple-jobholders-surge-august-2008-levels

First, looking at the reported composition of jobs, while full-time jobs actually declined by 5,000 to 142,296K part-time jobs soared by 430,000...

Curiously, if only looks at the unadjusted data, the spread between part and full-time jobs explodes, with some 1.2 million full-time, unadjusted, jobs lost in September, offset by a surge in 1.3 million part-time jobs.

But perhaps even worse than the breakdown in September job quality, was another seldom-touted series: the number of Multiple jobholders, or people who are forced to hold more than one job due to insufficient wages or for other reasons. It was here that the red flashing light came on because as a result of the 301K monthly surge in Americans holding more than one job, the 5th highest monthly spike in the past decade, the total number of Multiple jobholders soared to 7.863 million, the highest number since the financial crisis, and a number surpassed just once in the past decade: in August of 2008, just before all hell broke loose.



The Fight For A Real Economy

Responding with the appropriate policy the Kansas Cattlemen's Association is pushing for the restoration of the Franklin Roosevelt policy of gutting the speculators with the Glass-Steagall banking law. The following is a report from *Executive Intelligence Review New Service*:

Kansas Cattlemen's Directors Issue Support for Glass-Steagall, Will Take It to State Convention Oct. 10 (EIRNS)—The Board of Directors of the Kansas Cattlemen's Association, in a press release today on the upcoming KCA annual state convention at the end of October, issued its support for reinstating Glass-Steagall. The KCA Board reported that its 18th annual convention will be Oct. 28 and 29, and in giving the agenda of presentations, reported that, "KCA Supports the Passage of the 21st Century Glass-Steagall Act (S.1709, H.Res.3054)."

Today's release further states that there will be discussion of Glass-Steagall at the convention. "Mr. Bob Baker [of Executive Intelligence Review News Service] will provide an overview of the [Glass-Steagall] bills, an economic update, and will be on hand throughout the convention to discuss Glass-Steagall and other economic conditions facing the world economic outlook."

In the monthly KCA newsletter, Baker has been presenting need-to-know developments and policy priorities, in a guest column series titled, "Hey, America, Beef Up!" The series has focussed on Glass-Steagall/BRICS/American System economic dynamics. The latest installment reported in detail on the new paradigm shown by the Chinese One Belt, One Road initiative and presented at the G20: the principle of a "win-win" policy approach for worldwide development.

Kansas is the third-ranking state for beef production in the United States, which, along with dairy and other agriculture activity, is operating below cost-of-production and in crisis. In his monthly, "Message from the President," KCA head John Ney stressed the fact that "Prices for cattle are below the cost of production." He rhetorically asked, "Can you hear me now?" After listing the impossibly low prices cattlemen are getting for their livestock: (per hundred pounds) Calves—\$165; Feeder cattle—\$133; Fat (Finished) Cattle \$110; Cull Cows—\$75. Ney ended his message to KCA members by quoting President Dwight Eisenhower, "Agriculture is easy when your pencil is your plow, and your corn field is 1,000 miles away."

And for a more comprehensive discussion of real economics, a few excerpts from the article by Jason Ross of the *LaRouche PAC Science Team* on October 6 follows:

Economics Isn't About Money (a short excerpt)

https://larouchepac.com/20161006/economics-isn-t-about-money

October 6, 2016

by Jason Ross

Americans are deeply confused about economics, and this must be corrected. Many think economics is about money. It isn't. Others say it is about allocation of resources. Nope. Economics is the study of that most definingly human aspect of the human species: our ability to discover principles of nature and apply them to transform our relationship to nature and the ability of other members of our species to participate in that process.

Lyndon LaRouche has, over the past half-century, presented a science of economics and economic policy-making that has largely flown in the face of the ideas of America's chief policy-makers. During that time, the US economy has changed from one based on infrastructure-investment, science (as in the space program), and manufacturing, to one based increasingly on money itself. This is seen in the 50% growth of the so-called FIRE "industries" (Finance, Insurance, and Real Estate) as a portion of the US economy over the past 50 years, and the 50% collapse in manufacturing over that same time period.

Since the murder of President John F. Kennedy, US economic policy has been an accelerating disaster, bringing us to the present, where, less than a decade after what was considered the greatest financial

crisis since the Great Depression, the banking system is in even worse condition (see Wells Fargo and Deutsche Bank) and the physical economy (as measured in manufacturing and the state of our infrastructure) has plummeted still lower.

This system will not self-correct. It must be replaced by a functional system of policies designed to be in coherence with the physical science of economics.