

California Water and Infrastructure Report

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



For October 18, 2018

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>

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Man's dependency on an adequate supply of fresh water is an indisputable fact. It is equally a fact that there is an insufficiency of such water and that this insufficiency has been particularly felt in the Western United States. Many efforts have been and are continuing to be made to solve the problem of limited water supply, and although great strides have been achieved, so great is the problem and so important its solution that it now has become imperative that consideration be given to what at one time seemed unachievable proposals. The time has passed during which this problem can be solved through traditional local or piecemeal approaches. The solution must be equal in magnitude to the problem.

Frank E. Moss, Chairman, Special Subcommittee on Western Water Development 1964

A Note To Readers

Note the date of the words of U.S. Senator Frank E. Moss in the quotation above. More than 50 years ago we did have members of Congress who thought BIG. It is time to once again think big. Perhaps a couple of examples of thinking big from the early 1960s will remind us that we should emulate such leaders today.

As I promised last week, this week's report would provide a couple of examples from that era-- the era of the Apollo Project, great water projects and much more.

The two projects are first, the project that Senator Moss was the national leader of, the North American Water and Power Alliance (NAWAPA), and secondly, President John Kennedy's policy of building very large nuclear-powered desalination plants. A policy that not only saw national legislation passed by both houses of Congress and signed by the President, but also the first contract to build such a plant

was signed by the Atomic Energy Commission and the Metropolitan Water District of Southern California in 1964.

That both projects died in the wake of the assassination of President John Kennedy, along with the beginning shut down of the Apollo Project, is testament to the suicidal course the nation has been on since.

If we are to revive such great projects today, and President Trump is the only President since Kennedy that even has an inclination to do so, then the crucial issue, in addition to the obvious cultural and political revolution, requires a reorganization of the financial system to fund it. That is the subject of our Feature this week-- reviving the "American System" of economics that in the past built the nation's greatest infrastructure projects. The report begins by quotations from President Trump's speeches in 2017 in which he explicitly cites the great American leaders of that "American System" of the 19th Century as the model for his administration today.

And in the Rest of This Week's Report:

The U.S. Drought Monitor indicates Severe and Extreme drought continues to dominate the southern part of the state-- about 22% of the state to be precise.

Over last weekend PG&E shuts off power in parts of Northern California to pre-empt wildfires due to high winds. The company is to pay \$2.5 billion in damages from the October, 2017 fires in northern California. That amount would have buried a lot of utility lines preventing those fires. Again we see another example of the preventable damage occurring because of the non-investment in another area of the nation's infrastructure.

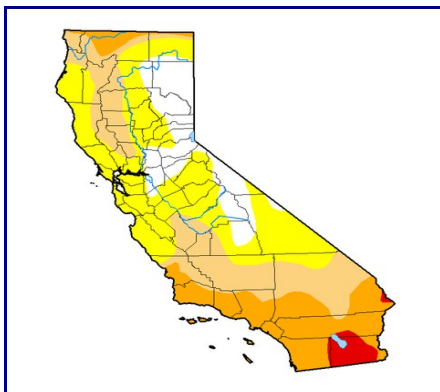
Our Oroville Dam Update this week has one new video showing progress in construction of the new spillways.

That is followed by the Colorado River Update, reporting on how as early as 2019, rationing of the waters of the Colorado shall begin.

U.S. Drought Monitor - California

As of October 16, 2018






Author: Eric Luebehusen, U.S. Department of Agriculture



Drought Conditions (Percent Area)

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current 10/16/2018	15.16%	84.84%	47.94%	22.77%	2.87%	0.00%
Last Week 10/09/2018	15.16%	84.84%	47.94%	22.77%	4.87%	0.00%
Three Months Ago 7/17/2018	14.85%	85.15%	44.14%	20.75%	2.77%	0.00%
Start of Calendar Year 1/02/2018	55.70%	44.30%	12.69%	0.00%	0.00%	0.00%
Start of Water Year 10/02/2018	12.18%	87.82%	47.97%	22.82%	4.93%	0.00%
One Year Ago 10/17/2017	77.88%	22.12%	8.24%	0.00%	0.00%	0.00%

Drought Intensities

- None: No Drought
-  D0: Abnormally Dry
-  D1: Moderate Drought
-  D2: Severe Drought
-  D3: Extreme Drought
-  D4: Exceptional Drought

Infrastructure Would Include Burying Electrical Power Lines

PG&E to pay \$2.5 billion in damages from the October, 2017 fires in northern California. That amount would have buried a lot of utility lines preventing the fires.

PG&E shuts off power in parts of Northern California to pre-empt wildfires

Some of the wildfires that engulfed California a year ago were caused by downed power lines and damaged electrical equipment.

by Yuliya Talmazan / Oct. 15, 2018

Source: NBC Bay Area

<https://www.nbcnews.com/storyline/western-wildfires/pg-e-shuts-power-parts-northern-california-preempt-wildfires-n920041>

Power was shut off to about 118,500 customers in parts of more than a dozen Northern California counties late Sunday in an unprecedented move to pre-empt wildfires with strong winds and extreme weather conditions.

Utility company Pacific Gas and Electric, or PG&E, said it was shutting off power to help reduce the risk of wildfires. Some of the [deadly infernos that engulfed the state this time last year](#) were caused by downed power lines and damaged electrical equipment.

PG&E and county officials were contacting customers directly and providing early warning notification, when and where possible, via automated calls, texts and emails, [reported NBC Bay Area](#).

The utility went ahead with the shutoff plan in some extreme fire-risk areas in the northern part of the state and near the Sierra Nevada as early as Sunday afternoon and then expanded it down to some areas of the North Bay, according to the station.

In June, California Department of Forestry and Fire Protection, or Cal Fire, [announced](#) that the utility's "electric power and distribution lines, conductors and the failure of power poles" caused at least a dozen wildfires in six Northern California counties a year ago during the state's deadliest and costliest wildfire season. A total of [44 people died](#) and more than 6,000 homes were destroyed by [blazes that devastated much of Sonoma County](#) and elsewhere in the region.

The so-called October 2017 Fire Siege involved more than 170 fires and burned at least 245,000 acres in Northern California. About 11,000 firefighters from 17 states and Australia helped battle the blazes.

PG&E has faced a growing financial liability over wildfires in the state. The utility has told shareholders it expects to pay more than \$2.5 billion in damages. California law compels utilities to pay for damages from wildfires if their equipment caused the blazes — even if the utilities weren't negligent.

Oroville Dam Update

Just one new video for this week

Oroville Spillways Phase 2 Update October 10, 2018

<https://www.youtube.com/watch?v=CeiWV6A6X-4>

[California DWR](#)

Published on Oct 16, 2018

Crews work through the night on October 9 and into the morning of October 10 to place the final four erosion-resistant concrete (ERC) structural slabs on the upper chute of the main spillway.

Colorado River: Yes, Rationing Is Coming

Such a future-- near term, by the way-- did not need to happen. See the report below on NAWAPA.

Colorado River news gets worse: Lakes Mead, Powell at just 41 percent of normal

- [By Tony Davis Arizona Daily Star](#)
- Oct 13, 2018
- https://tucson.com/news/local/colorado-river-news-gets-worse-lakes-mead-powell-at-just/article_4e0652b2-7829-5b39-9cf5-f2da2bcd1fb1.html
- *It was another bad year on the Colorado River, and the numbers prove it.*

- *River flows into Lake Powell at the Arizona-Utah border were 43 percent of normal in water year 2017-2018, which ended at the end of last month. That's the lowest since the extreme drought year of 2002, when they were 24 percent of normal. It's the third lowest annual flow into Powell since records on river flows started being kept in 1906.*
- *The river's annual flows were above average in only four of the 19 years since 2000. This was the river's driest 19-year period on record.*
- *The combined storage of river water in Lake Powell and Lake Mead is about 41 percent of normal. It's the lowest combined storage since Lake Powell was filling during the mid-1960s after the closing of the gates at the newly constructed Glen Canyon Dam.*
- *This year's flows into Lake Powell were far less than the federal forecast back in April of about 52 percent of normal. One reason is that flows into Powell were 1 percent of normal in September — the driest on record — and 2 percent of normal in August — the second driest on record.*

"We had a pretty good year in 2017, with an inflow into Powell of 110 percent of average. But unfortunately we lost that storage and a little bit more in 2018," said Dan Bunk, a U.S. Bureau of Reclamation hydrologist.

The bureau predicts a 57 percent chance of the river's first shortage in 2020, with the odds of shortages increasing in future years. That would happen if Lake Mead drops below 1,075 feet at the end of 2019.

Without a formal Drought Contingency Plan in place, under which less water would be used, there's about a 75 percent chance of Mead dropping below 1,050 feet by 2026, which would require deeper cuts in deliveries, the bureau says.

That's based on assuming the trends of declining river flows from 1988 to 2015 continues. With a drought plan, the odds of Mead dropping below 1,050 by then fall to a little over 50 percent.

Without a drought plan, there's also at least a 40 percent chance of Mead dropping below 1,025 feet from 2024 through 2026, bureau figures show, based on the same 1988-2015 flow record. With a plan, the odds of such low levels drops to less than 20 percent for all those years and to as low as 10 percent in 2024.

At 1,025 feet, a federal takeover of how the river's flows are divided is possible, as federal officials would want to keep the lake from sinking lower and approaching "dead pool" at 895 feet, when no water could be pulled from Mead.

Colorado River Reservoirs Start Water Year At Lowest Point Since Filled

By [Luke Runyon](#)

October 16, 2018

<http://www.kunc.org/post/colorado-river-reservoirs-start-water-year-lowest-point-filled#stream/0>

"Somebody's going to have to use less:" River managers grapple with drought plans

Luke Runyon/KUNC via Cronkite News

October 16, 2018

<https://www.grandcanyonnews.com/news/2018/oct/16/somebodys-going-have-use-less-river-managers->



Lake Powell stores Colorado River water behind Glen Canyon Dam, completed in 1966 near Page. After decades of drought and population growth, the reservoir is at less than half its capacity. (Luke Runyon/KUNC)

Two Great Projects That Would Have, and Still Can, Solve California's Water Problem and Much More

During the administration of John Kennedy, two projects were initiated to permanently ensure that not only California, not only the entirety of the Western States, but the entire region west of the Mississippi River would become a single, integrated water management system. The assassination of President Kennedy set in motion a process through the later half of the 1960s that not only killed those projects, but created the opening for a horrible cultural, political and economic policy change that has brought us today to being a nation that with a broken-down infrastructure, a broken-down industrial capability, a broken-down labor force, a collapsing life-expectancy, and a largely disconnected youth population with no skills and heavily drug addicted.

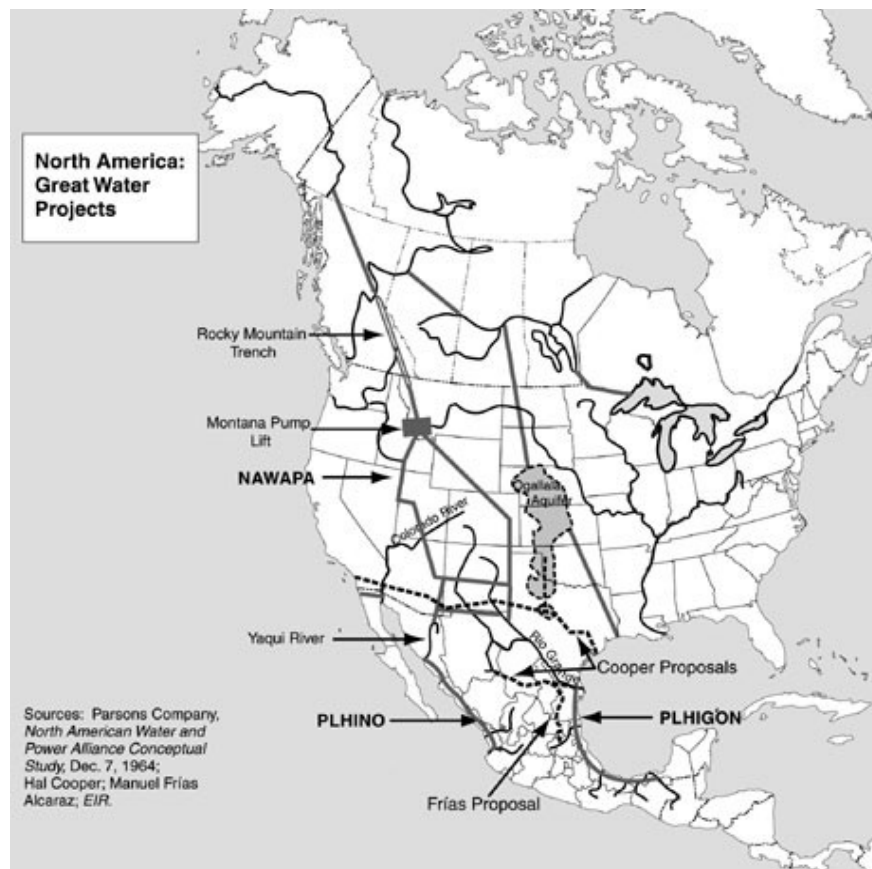
So let us look at those projects put forth during the last period of when actual physical economy dominated the economy of the nation and was understood by most Americans as the only proper way to run a country.

1: The North American Water and Power Alliance (NAWAPA)

NAWAPA is a grand design to improve the water cycle of the North American continent by directing northwestern water throughout the southwest. This would ensure stable and adequate water not only to California and Texas, but to the entire elevated regions of the Great Basin as well. The scale of this project is truly impressive, potentially diverting between 130 and 200 km per year.

This was the policy of the Kennedy administration. NAWAPA was designed in the early 1960s in California. Those, then building the State Water Project, knew that once that project was completed, work must begin immediately on the next one required to bring the water that will be needed by the coming generations of Californians.

Just a few words about NAWAPA, here. For an in-depth report, I recommend the links found below.



The North American Water and Power Alliance

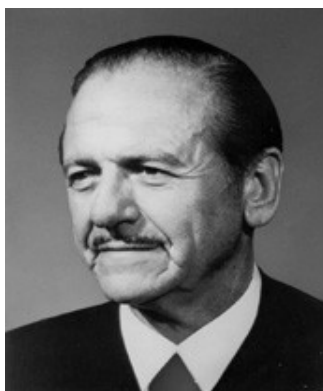
NAWAPA is a continental water management system that extends from Alaska into Mexico, and from the Pacific to the Hudson's Bay. It is a system of dams, reservoirs, canals, tunnels, and power plants that will make available abundant water for agriculture and people, control floods and provide new waterways for shipping. It will re-industrialize the nation, putting, immediately, seven million people to work at productive occupations at high wages. It will restore the nation to being once again the leading production center for humanity. As a side benefit it will, once and for all, mean the disease of environmentalism has been eradicated.

Here is another map of the greatest project ever conceived by man.



This map of the 1960s **"North American Water and Power Alliance"** (NAWAPA) shows the continental scale of the needed water supply improvements in North America, and also makes the point on how behind and backward the economies of the United States, Canada, and Mexico have needlessly become under 30 years of anti-development "free market" policies. For three decades, while the amount of money poured into mergers, speculation, and the "markets" rose, investment in infrastructure, industry, and agriculture slowed down to nothing.

The NAWAPA Project shown here, was drawn up by the Pasadena, Calif.-based firm of Ralph M. Parsons Co., and favorably reviewed by Congress in the 1960s for completion by the 1990s, but it was never begun. The idea is to divert southward some 15% of the MacKenzie River (northern Canada) runoff now going towards the Arctic, channelling it through the 500-mile Rocky Mountain trench, then along various routes, eventually reaching even Mexico. The broken lines show new, navigable canals. The principle--on a grander scale--is the same as that of the Tennessee Valley Authority of the 1930s, and the 1950s St. Lawrence Seaway, both shown on the map. NAWAPA could supply an additional 135 billion gallons of fresh water to the United States, Canada, and Mexico, plus power, and vast new areas of cultivation. It would involve thousands of skilled jobs to construct and operate.



U.S. Senator Frank Moss of Utah led the fight for NAWAPA in the late 1960s and early 1970s.

Here are links to major reports and videos featuring the LaRouche PAC campaign over the years to revive the NAWAPA policy:

NAWAPA XXI Animated Overview

<https://larouchepac.com/20120410/nawapa-xxi-overview>

15 minutes

NAWAPA XXI - Feature

<https://larouchepac.com/20140727/nawapa-xxi-feature>

30 minutes

NAWAPA 1964-- featuring the role of U.S. Senator Frank Moss

<https://larouchepac.com/20111122/nawapa-1964>

60 minutes

Increasing the Productivity of the North American Water Cycle: The Nuclear-Thermonuclear NAWAPA XX I

by Benjamin Deniston

https://larouchepac.com/sites/default/files/20130822-NAWAPA-water-cycle_0.pdf

2: Desalination: The Kennedy administration policy of building nuclear-power desalination plants

Following this introduction on desalination are two reports that document the plans, actually put into legislation and contracts signed, to build nuclear-powered desalination plants. Subsequent developments, especially the paradigm shift to the environmentalist “post-industrial society,” cancelled this policy does not mean it cannot be revived today. A dozen or so such plants located on the California coast and in San Francisco Bay would do much to ending California's perpetual water crisis within a decade.

A way to ensure the availability of freshwater for the coastal regions is by purifying ocean water through desalination. This is effectively the creation of new, man-made water cycles. The ocean water brought onto land by man-made desalination will participate in various biological and economic processes, before ultimately returning to the ocean (as will all terrestrial water, for the most part). So it is not fundamentally different than what already occurs naturally, but, rather than being subject to the limitations (or variations) of natural cycles, desalination allows mankind to generate and control his own cycles, when and where needed (at least in coastal regions).

Currently, the most efficient technique (in terms of required energy per unit of freshwater produced) is to pump ocean water through membranes in a reverse osmosis process, though this is considered to be an energy-intensive process.

The key to vastly expanding the use of this capability is to increase the energy-flux density of the national economy, as measured as power per capita and power per square kilometer. This can be translated into a lowering of the cost of power, enabling large-scale desalination as a mode of resource development to enter the realm of economically affordable options.

To do this today will require the rapid expansion of advanced nuclear power systems, and the greatest potential would come from a crash program for the development of fusion power, as LaRouche has called for in his economic policy memorandum for the United States.

Nuclear-Powered Desalination in California– Parts I-IV (excerpts)

By Patrick Ruckert

April 9, 2015

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

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.

The following excerpts are from the Congressional Record from September 13, 1966 through October 4, 1966. It can be found in Legislative history: Saline water conversion act, Volume 6, Parts 1-2, page 669-683

Here is the description of the House bill as printed in the Congressional Record for September 13, 1966:

“HR 17558. A bill to amend Public Law 89-428 to authorize the Atomic Energy Commission to enter into a cooperative arrangement for a large-scale for a large-scale combination nuclear-power-desalting project, and appropriations therefor, in accordance with section 261 of the Atomic Energy Act of 1954, as amended; to the joint committee on atomic energy.”

Both the House and the companion Senate bill passed nearly unanimously. Then the Vietnam war exploded, environmentalism began taking over the nation, and the economy was transformed into a gambling casino. And like the North American Water and Power Project, which was also moving through the Congress at that time, after the assassination of President Kennedy the nation changed, for the worse.

Introducing the Senate bill on September 13, 1966, was Thomas H. Kuchel, a Republican from California. He said:

“...I am pleased to introduce a bill (S. 3823) to authorize the Department of the Interior to participate in the construction and operation of a massive desalination plant and nuclear power generating facility to be built off the coast of southern California....

“It will provide southern California with 150 million gallons of fresh water per day.... it will more than double the combined capacity of all the salt water conversion plants in the world today.

“This bill is the outgrowth of a Federal desalination program extending back over 15 years. It is the fruition of the cooperative efforts of the Metropolitan Water District of Southern California, the Department of the Interior and the Atomic Energy Commission. On August 18, 1964, these agencies signed a contract authorizing a wide study of a huge nuclear fueled sea water conversion plant which would provide large quantities of electric power. The objective was a plant capable of producing 150 million gallons of water per day, enough to supply a city the size of Boston or San Francisco.

“One of the more interesting aspects of the report was Bechtel’s recommendation that the complex be placed on a manmade island about 3,000 feet off-shore from Bosa Chica State Beach in Orange County....

“Responsible authorities estimate there will be 50 million people in California before the turn of the century.”

Included in the Congressional Record by Senator Kuchell was a draft of the authorizing legislation from the Secretary of the Interior, Steward L. Udall, which included the following....

Two bills were before the Congress in 1969:

H.R. 6716– A BILL to authorize appropriations for the saline water conversion program for fiscal year 1970, and

S. 1011– to authorize appropriations for the saline water conversion program for fiscal year 1970, and for other purposes

The scene of action is the April 25, 1969 hearing in the House of Representatives, Subcommittee on Irrigation and Reclamation of the Committee on Interior and Insular Affairs.

Early in the meeting a letter read to the committee from the Department of the Interior, January 17,

1969, signed by Stuart Udall, Secretary of the Interior, included the following:

“As you know, in 1966 we obtained authorization to construct the world’s first dual-purpose nuclear power and desalting plant on a man-made island off the coast of Southern California in cooperation with the Metropolitan Water District, Southern California Edison, San Diego Gas & Electric Company and the City of Los Angeles Department of Water and Power. It is very questionable whether this project can proceed at this time. The utilities have withdrawn their support and WMD has decided to proceed on the project at a latter time.

“Under the new timetable, construction would start in the mid-1970s, and the plant would begin producing 50 million gallons of desalted water daily about 1980. The previous timetable had called for the start of construction in 1968, initial operation in 1974 and expansion of the plant to a capacity of 150 gpd by 1978. We are investigating other opportunities for reaching this historical milestone in the application of desalting technology.

“Under an agreement between the U.S., Mexico and the International Atomic Energy Agency signed in 1965 the use of very large dual-purpose desalting plants in the Southwest was given detailed consideration. The study team considered for the first time the total water needs of a vast arid region and the potential of desalting to provide fresh water on such a scale. The study firmly established the technical feasibility of nuclear power and desalting plants for the arid regions of California and Arizona in the U.S. and Baja California and Sonora in Mexico....”

Here is an excerpt from the following report:

Nuclear NAWAPA XXI: Gateway to the Fusion Economy

http://21sci-tech.com/Nuclear_NAWAPA.html

The Nuclear NAWAPA XXI and the New Economy

by Michael Kirsch

http://21sci-tech.com/Nuclear_NAWAPA_XXI/Nuclear_NAWAPA_New_Economy.pdf

The Model for Nuclear Desalination The most advanced research for large-scale desalination was launched under John F. Kennedy, but was never implemented. To this day, these designs are the most ambitious, rational, and scientific, and are therefore the model for today. In January 1963, Kennedy formed a task group with the Executive Office of Science and Technology to investigate the use of large nuclear reactors for desalination. Working closely with the Atomic Energy Commission (AEC) and the Department of Interior, the task group issued its report in March 1964, five months after his assassination. Their report estimated that if an appropriate research and development program were actively pursued, large-scale dual-purpose installations could produce 1,000 to 1,900 megawatts of electricity and 500 to 800 million gallons of water per day (.6-.9 million acre feet per year (MAFY)). The report also suggested a program to develop and demonstrate a plant operating with an 8,300-MWt reactor producing approximately 1,400 megawatts of electricity and 600 million gallons of water per day (.7 MAFY).

Feature

There will be no infrastructure policy for the nation unless the fundamental question of how it is to be

funded is clearly answered. That answer requires that we clearly understand how the nation has funded great infrastructure and industrial development in its past history. How did Abraham Lincoln fund the Transcontinental Railroad? How was California's Central Valley project funded during the administration of Franklin Roosevelt? Those are just two projects that required what some of the nation's leaders during the 19th Century called the "American System."

President Trump has spoken of the "American System" as his model of how to rebuild the nation. The presentation by William Wertz, excerpted below, begins with Trump's speeches on that topic. But then, points out what is missing in the President's understanding of the "American System." And that is how only national banking and a national credit system can provide the financial means to accomplish what the President clearly wishes to achieve.

Part II from this presentation will explore this topic in more depth. Or, you can go to the link and watch or read the entire presentation now.

LaRouche PAC Manhattan Project Dialogue with Will Wertz: Part I

October 13, 2018



Will Wertz

Cutting the Gordian Knot with the Sword of Damocles (excerpts)

<https://larouchepac.com/20181014/cutting-gordian-knot-sword-damocles> (video)

Here is the transcript:

https://larouchepub.com/eiw/public/2018/2018_40-49/2018-42/pdf/05-14_4542.pdf

WILLIAM WERTZ:

We are in a situation where we have a President of the United States who is unique. He has become elected and is committed to reversing certain policies which Lyndon LaRouche has opposed for decades. The policy of free trade; the policy of a post-industrial society; the policy of globalization; out-sourcing of jobs from this country and other advanced sector countries. He has opposed the Paris Climate Treaty, recognizing that this is illegitimate and if implemented would actually result in the destruction of human life and human productive activity. During the campaign, Trump said that he was in favor of Glass-Steagall, the law that was implemented in the 1930s under Franklin Roosevelt which separated commercial banking oriented towards productive investment, from speculative Wall Street investment. He also, by the way, referred to the fact that there was a financial bubble; something which has continued to persist. Then in March of 2017, he made a remarkable series of speeches in Michigan, Kentucky, and Washington, D.C., in which he advocated explicitly the American System -- or what he called the American model.

What I would like to do is to reference excerpts from those three speeches, both to give you a sense of the potential for implementing the American System under President Trump should we be successful as

we must in defeating the British coup attempt against him. But also to indicate an area of omission which must be correct in his understanding of the American System.

So, let me begin with his speech of March 15, 2017 in WillowRun, Michigan. At that time, he said:

"Our great Presidents, from Washington to Jefferson to Jackson to Lincoln, all understood that a great nation must protect its manufacturing, must protect itself from the outside.... We must embrace a new economic model. Let's call it 'The American Model.' Under this system, we will reduce burdens on our companies and on our businesses. But, in exchange, companies must hire and grow in America. They have to hire and grow in our country. That is how we will succeed and grow together -- American workers and American industry side-by-side. Nobody can beat us. Because whether we are rich or poor, young or old, black or brown or white, we all bleed the same red blood of patriots.... Great Americans of all backgrounds built the Arsenal of Democracy -- including the legendary Rosie the Riveter, who worked here at Willow Run.... Now, these hundreds of acres that defended our democracy are going to help build the cars and cities of the future ... so I ask you today to join me in daring to believe that this facility, this city, and this nation will once again shine with industrial might.... I'm asking all of the companies here today to join us in this new Industrial Revolution."

Five days later, President Trump spoke at Freedom Hall in Louisville, Kentucky. An excerpt from his speech follows.

"Our first Republican President, Abraham Lincoln, was born right here in Kentucky.... And the great 19th Century American statesman, Henry Clay, represented Kentucky in the United States Congress. Henry Clay believed in what he called the American System, and proposed tariffs to protect American industry, and finance American infrastructure.... Clay was a fierce advocate for American manufacturing.... He said, very strongly: Free trade, which would throw wide open our ports to foreign production without duties, while theirs remains closed to us.... Clay said that trade must be fair, equal, and reciprocal.... For too long, our government has abandoned the American System."

Finally, the next day -- March 21st -- President Trump addressed the National Republican Congressional Committee dinner in Washington, D.C.:

"I have called this model ... the American Model. And this is the system that our Founders wanted. Our greatest American leaders -- including George Washington, Hamilton, Jackson, Lincoln -- they all agreed that for America to be a strong nation it must also be a great manufacturing nation.... The Republican platform of 1896 -- more than a century ago -- stated that: 'Protection and reciprocity are twin measures of American policy and go hand in hand.'... The platform went on to say: 'We renew and emphasize our allegiance to the policy of protection, as the bulwark of American industrial independence and the foundation of American development and prosperity.'

"Our first Republican President, Abraham Lincoln, ran his first campaign for public office in 1832 -- when he was only 23 years old. He began by imagining the benefits a railroad could bring to his part of Illinois -- without ever having seen a steam-powered train. He had no idea, and yet he knew what it could be. Thirty years later, as President, Lincoln signed the law that built the first Transcontinental Railroad, uniting our country from ocean to ocean....

"Another great Republican President, Dwight Eisenhower, had a vision of a national infrastructure plan. As an officer in the Army after World War I, he joined a military convoy that trekked across the nation to the Pacific Coast. It traveled along the Lincoln Highway -- called then the Lincoln Highway. Its journey began by the South Lawn of the White House, at a monument known today as Zero Milestone.... The journey made a great impression on the then-young Eisenhower. More than three decades later, as President, he signed the bill that created our great Interstate Highway System -- once again uniting us as a nation. Now is time for a new Republican administration, working with our

Republican Congress, to pass the next great infrastructure bill."

However, the purpose of this presentation today is to emphasize, as I said just a few minutes ago, the importance of implementing the American System as President Trump has advocated; but also to point out a big omission thus far in terms of what he has presented as the means of implementing that American System. This has real implications both in terms of the upcoming discussion of a major infrastructure policy in this country. It also has major implications in terms of the necessary Four Power agreement among the United States, Russia, China, and India among other potential countries such as Japan, South Korea to build a New Bretton Woods System that will make possible the development of the entire planet; the exploration of space; the development of new forms of energy such as fusion power; and the expansion of capital goods production in this country as well as other countries for that purpose, which will mean millions of productive jobs. In a certain sense, the two areas that we have to concentrate on are: 1) infrastructure development in the United States; and on the other hand, the export of capital goods to develop the rest of the planet, even as we unite to develop mankind's mastery over space.

Now, the area of omission that I want to address is the area of financing of these developments that are required for humanity. As Dennis Speed indicated, part of our platform to secure the future of America is Lyndon LaRouche's Four Laws. That includes the implementation of Glass-Steagall, which is yet to be done. It includes an emphasis on productive investment so as to increase the productive powers of labor through an emphasis on capital-intensive forms of production. It includes space exploration and the development of fusion power. Those are the first, third, and fourth of LaRouche's Four Laws. The second law is, in a certain sense, the crucial element here. I'll read that second law: "A return to a system of top-down and thoroughly defined national banking. The actually tested successful model to be authorized is that which had been instituted under the direction of the policies of national banking which had been actually successfully installed under President Abraham Lincoln's superseding authority of a currency created by the Presidency of the United States; that is, the greenbacks. As conducted as a national banking and credit system placed under the supervision of the Office of the Treasury Secretary of the United States."

The problem which I'm raising here is that if you look at the Presidents of the United States who President Trump referred to -- Washington, Jefferson, Andrew Jackson, Abraham Lincoln -- two of those were for national banking and national banking credit to facilitate manufacturing development. That is, George Washington, whose Secretary of the Treasury was the author of the First National Bank of the United States, and who defended the constitutionality of that National Bank. Lincoln was the first Republican President, who advocated not only the greenbacks as legal tender -- these are currency notes, Treasury notes issued to fund the Civil War; which also facilitated the economic development of the United States following the Civil War. He also advocated a National Currency and Banking Act, which passed in 1863-64 following the greenback policy which was passed in February of 1862. Now the two others, Jefferson and Jackson, were thoroughly opposed to this. Jefferson wrote an opinion, as did the Attorney General of the United States at the time, opposing Hamilton, saying that because the Constitution did not explicitly call for a National Bank that it was unconstitutional. Andrew Jackson, when he was re-elected in 1832, vetoed the Second National Bank.

So, you have a certain contradiction here, and it needs to be resolved. If we are to have the American System of Political Economy as espoused by and developed by Alexander Hamilton and continued by Abraham Lincoln, as well as later by such statesmen and Presidents as McKinley, who President Trump has also referred to, and Franklin Roosevelt, whose Arsenal for Democracy President Trump referenced in his speech in Detroit and whose Glass-Steagall bill President Trump supported, at least during the campaign. If we are to have that American System, we must recognize that LaRouche's second law is absolutely necessary. We need the equivalent today of the greenback policy.