

# California Water and Infrastructure Report

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



**For September 20, 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>

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*It's not just rocket engines that the U.S. space industry depends upon Russia for. An article in Forbes Sept. 13 details the fact that less than 20% of the in-space electric propulsion units used in American-made satellites to maneuver them to keep them in their proper orbit, are made in the U.S. The rest are imported, mainly from Russia*

*The U.S. Defense Industrial Base Depends Upon Russian Space Technology*

## **A Note To Readers**

The above quote (the full item is the last item in this report) illustrates just one area in which the U.S. is actually unable to produce key advanced technological elements required by a 21<sup>st</sup> century economy. I highlight it in order to disabuse some who do believe that other nations could not be more advanced than our own. It is the same with infrastructure. Just one example: Until China built the *Move Water North* project, it was the *Central Valley Project* and the *California State Water Project* that were the largest and most complex water management system in the world. But, as noted below in the article, “Reps. Denham, Costa bring water storage to the Valley,” that “California’s last large-scale water storage facility was built in 1979.”

For almost 50 years the system that was adequate for the state's population of 20 million people has seen no expansion. With 40 million people now in the state, only a revival of the spirit that did build those great California projects will do. In 1962 and 1963, President John Kennedy inaugurated more than half-a-dozen water projects in mainly the western states of the nation. In each of his speeches he made this point: We are not building these projects for ourselves but for those who will benefit from them 20 to 40 years from now.

Here are that President's speeches to some of those dedications. I hope you will watch them and pass them on to others.

## **President John F. Kennedy's Speeches Toward a Nation Wide TVA**

<http://media.larouchepac.com/larouche/videos/20111206-reclaimjfk-part-one.mp4>

<http://media.larouchepac.com/larouche/videos/20111206-reclaimjfk-part-two.mp4>

<http://media.larouchepac.com/larouche/videos/20111206-reclaimjfk-part-three.mp4>

<http://media.larouchepac.com/larouche/videos/20111206-reclaimjfk-part-four.mp4>

<http://media.larouchepac.com/larouche/videos/20111206-reclaimjfk-part-five.mp4>

<http://media.larouchepac.com/larouche/videos/20111206-reclaimjfk-part-six.mp4>

Now, contrary to that spirit is that of Governor Jerry Brown, who not only is the most extreme of the public officials in his demand that the nation adopt his zero-growth ideology, but now goes as far as implicitly calling for the assassination of President Trump:

<http://www.foxnews.com/politics/2018/09/19/california-gov-brown-on-trump-somethings-got-to-happen-to-this-guy-hes-going-to-undermine-america.html>

*September 19, 2018*

*California Gov. Jerry Brown ramped up his criticism of President Trump in an interview that aired Monday – calling the president a “saboteur” in the fight to combat climate change and saying that “something’s got to happen to this guy.”*

*Speaking to MSNBC’s Andrea Mitchell at an environmental summit in San Francisco last week, Brown tore into Trump for the president’s controversial tweets about the death toll in Puerto Rico from last year’s Hurricane Maria and urged voters to vote for Democrats in November’s midterm elections in an effort to thwart Trump’s agenda.*

*“We never had a president who was engaged in this kind of behavior,” Brown said. “I mean he’s not telling the truth; he keeps changing his mind; he’s sabotaging the world order in many respects.”*

*Brown added: “It’s unprecedented, it’s dangerous, and hopefully this election is going to send a strong message to the country; the Democrats will win...something’s got to happen to this guy, because if we don’t get rid of him, he’s going to undermine America and even the world.”*

## **In This Week's Report**

We begin with the U.S. Drought Monitor and then a review of the Summer weather and coverage of the El Nino forecast to arrive this Fall.

The Oroville Dam Update includes one video and an item on the repair cost is now estimated at \$1.1 billion.

A study that identifies the challenges the water management system of the state faces does identify the factors that define the future in regard to the State's water management system.

The last large-scale water storage facility to be built in California was constructed in 1979, and now,

almost 40 years later, the drought-stricken state will receive funding for projects to help secure its water supply thanks to two local representatives.

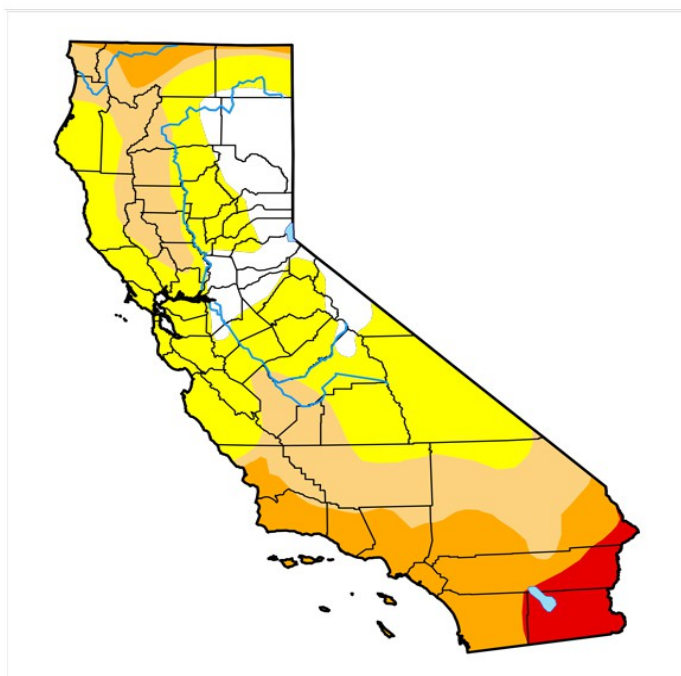
And sure to set off a new round of controversy is a Department of Water Resources release of an economic analysis showing value of investing in WaterFix (the Delta tunnels). The water war continues, also with, in addition to the state water board proposal to impose average unimpaired flows of 40 percent on the Tuolumne, Stanislaus and Merced rivers, and a second, lesser-known phase to the plan would impose flow requirements on the Sacramento River, which could have the same impacts on West Side agencies.

The last item this week is the article, “U.S. Defense Industrial Base Depends Upon Russian Space Technology.”

## U.S. Drought Monitor

While the drought in California remains of a moderate severity, week by week it usually intensifies slightly.

### U.S. Drought Monitor California



**September 18, 2018**

(Released Thursday, Sep. 20, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	12.18	87.82	47.97	22.82	4.94	0.00
<b>Last Week</b> 09-11-2018	12.18	87.82	47.97	22.82	4.94	0.00
<b>3 Months Ago</b> 06-19-2018	30.37	69.63	37.07	20.75	2.77	0.00
<b>Start of Calendar Year</b> 01-02-2018	55.70	44.30	12.69	0.00	0.00	0.00
<b>Start of Water Year</b> 09-26-2017	77.88	22.12	8.24	0.00	0.00	0.00
<b>One Year Ago</b> 09-19-2017	77.88	22.12	8.24	0.04	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Jessica Blunden  
NCEI/NOAA



<http://droughtmonitor.unl.edu/>

## The Forecast

A couple of articles below are excerpted, which review the summer and provide some discussion of the potential El Nino for this fall and winter. The second article, “El Nino Watch,” provides a guide to what is and what is the significance of El Ninos. I included just the questions the article poses and you will have to go to the link for the answers.

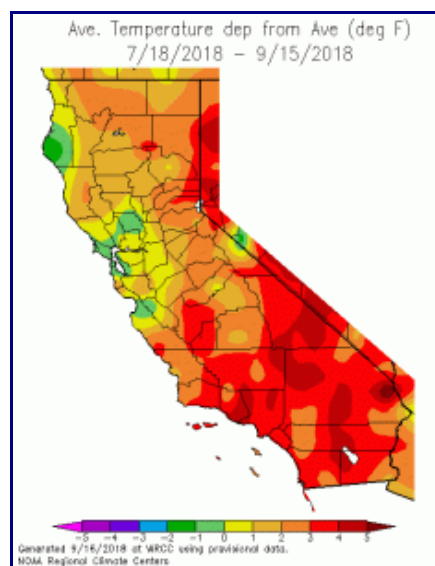
## ***Record summer heat across much of state retreats; some deeper thoughts on El Niño***

by [Daniel Swain](#) on September 18, 2018

### ***Record summer heat (in many spots, except SF) fades***

<http://weatherwest.com/archives/6459>

*After a truly searing start to summer across most of California, especially in the south, the last several weeks have felt rather mild by comparison. The record-breaking heatwaves of July, followed by record warm ocean temperatures later in the summer in SoCal, made for very uncomfortable conditions across some of California's most densely populated regions for much of the summer. Meanwhile, in interior NorCal, record daytime highs were few and far between—but relentless overnight warmth and persistently above-average daytime temperatures again combined to produce record or near-record summer temperatures. Indeed: across many parts of southern and interior California, 2018 was the warmest summer on record.*



*Over the past two months, nearly all of California has been much warmer than average except for San Francisco Bay Area and North Coast. (WRCC)*

### ***Wildfire activity moderates (for now), but autumn resurgence plausible***

*Following [an extraordinarily bad start to the fire 2018 fire season](#), which included the devastating Carr Fire (and incredible “fire tornado” in Redding) and the now-largest wildfire in California history (the Ranch Fire, which exceeded the previous acreage record set by the Thomas Fire just last December), fire activity has moderated somewhat in recent days as temperatures have cooled. Fire risk is still extremely high in many areas, and the traditional peak of fire season in California (which coincides with the often warm and dry autumn offshore winds) has only just begun. At the moment, there are no severe wind events on the horizon, which is good news—but Santa Ana wind season extends through December ([as last year's late-season firestorms vividly illustrated](#)). So after the present reprieve, I would not be surprised to see a renewed surge in heat, wind, and fire activity before the winter rains arrive. I'll keep my fingers crossed that we get a break this year, though. It's already been a rough few years as far as California wildfires go.*

### ***El Niño watch: Here's what it means for cities***

*There's a 70 percent chance of an El Niño event occurring this winter*

By [Megan Barber](#)

Sep 19, 2018

<https://www.curbed.com/2018/9/19/17878302/el-nino-forecast-2018-united-states>

*Los Angeles, California, could see wet weather this winter if a moderate El Niño occurs. Shutterstock Think back a few years to the winter of 2015-2016 and you might remember a plethora of headlines surrounding El Niño, a phenomenon that can influence weather patterns around the world. That winter, we wondered whether a record-breaking El Niño event could [save California from drought](#) and how it impacted [snow in the Northeast](#).*

*Now, El Niño is [set to return](#). In an update from earlier this month, the National Oceanic and Atmospheric Administration (NOAA) [confirmed](#) that there's a 50-55 percent chance of an El Niño onset in the U.S. through November. By winter, the chance of El Niño conditions increases to about 65-70 percent.*

*But what does it all mean, and why should city dwellers care? Curbed breaks through the hype to tell you what exactly El Niño is and what you can expect this winter.*

***What is El Niño?***

***When does El Niño happen?***

***Weather is weather. Why do El Niño's matter?***

***What does El Niño mean for forecasts this fall and winter?***

***Will it snow more?***

***What now?***

## **Oroville Dam Update**



A drone provides an overview of the recovery effort on the upper chute of the Lake Oroville main spillway and the emergency spillway splashpad on the hillside above the secant pile wall at the Butte County, California site. DWR/2018

## **Oroville Spillway 360 Flyover September 18, 2018**

[California DWR](#)

Published on Sep 19, 2018

<https://www.youtube.com/watch?v=qhH3SiBorq0>

### ***Lawmaker voices concerns over Oroville cost overruns***

*The project's cost is now estimated at \$1.1 billion.*

[Tim Hearden](#) | Sep 19, 2018

<https://www.westernfarmpress.com/water/lawmaker-voices-concerns-over-oroville-cost-overruns>

*The California congressman whose district includes the area round the Oroville Dam is voicing concerns that the cost of a dam reconstruction project now in its second year is now projected at \$1.1 billion.*

*That's up from the \$870 million projected in January, and way above the state Department of Water Resources initial cost estimate for repairs of \$200 million, says Rep. Doug LaMalfa, a Republican rice farmer from nearby Richvale.*

*"The newest estimate of over \$1 billion is many times more than original estimates initially released to the public," he says. "I'm glad to see high-quality new construction being built to replace the failed infrastructure, but the rising costs are troubling."*

*DWR officials say the updated estimate reflects additional excavation on the emergency spillway hillside to reach competent rock, additional material for construction of the splashpad, and additional crews and equipment necessary to meet a Nov. 1 construction deadline. It also reflects additional staff time, technical consultants and interagency support, and an estimate for site restoration that will occur after construction of the spillways is complete, the agency explains in a news release.*

### ***COSTS ADDING UP***

*In addition to the \$160 million price tag for emergency response efforts that ended in May 2017, the DWR now expects the dam recovery project to total \$940 million. That includes \$630 million for main and emergency spillways work and \$310 million for related work, including debris and sediment removal, powerline replacement, developing access roads, and staff and consultants' work, officials say.*

*These costs could be only the beginning, however. DWR spokeswoman Erin Mellon has told reporters that the estimate could go higher, as costs are affected by conditions at the site and direction from regulatory bodies during the course of the project.*

*But the biggest cost could be legal claims from affected residents and businesses that seek billions of dollars in damages allegedly caused by the DWR's mismanagement of the dam, the Los Angeles Times reports. Those include one suit by 42 affected individuals, businesses, and farms, another representing the city of Oroville, and a third seeking class action status, according to the newspaper.*

*The DWR wants the Federal Emergency Management Agency to cover 75 percent of the cost of construction, with the rest coming from State Water Project contractors. But so far the federal government has only approved reimbursement of \$87.4 million of the \$116.5 million submitted by DWR — a number that's unchanged from earlier in the year.*

### ***FEMA QUESTIONS***

*LaMalfa and Rep. John Garamendi, D-Calif., said this spring that FEMA officials told them an unfavorable independent review of the DWR's management of the dam may jeopardize federal reimbursement for the dam's reconstruction.*

*A forensic team commissioned to study the dam's near-failure issued a 584-page report in January that largely blames a culture of complacency within the DWR that insulated the agency from access to industry knowledge and technical expertise to safeguard the dam and its mile-long spillway.*

*Lake Oroville is the chief reservoir for the State Water Project, whose contractors irrigate about 750,000 acres of Central Valley farmland and serve more than 26 million customers, according to the project's website.*

## **At Least This Study Identifies the Challenges the Water Management System of the State Faces**

Though locked into essentially the mentality of man-caused climate change and the narrative that really we humans can no longer think big, this study does identify the factors that define the future in regard to the State's water management system:

### ***To Manage Future Water Shortages, California Must Update its Water Grid***

*The state's water supply system will be strained to cope with climate change. New investments – and new ways of investing – are needed to improve water management, especially to recharge groundwater.*

*By Ellen Hanak and Jeffrey Mount*

*September 18, 2018*

<https://www.newsdeeply.com/water/community/2018/09/18/to-manage-future-water-shortages-california-must-update-its-water-grid>

*California's climate is changing, and droughts are becoming more intense.*

*Climate pressures will make future droughts more intense and affect the water system in the following ways:*

- *Higher temperatures reduce runoff by increasing evaporation. This is already contributing to declines in Colorado River flows and could affect other California water supplies in the future. It also creates challenges in [providing cold water for salmon](#).*
- *Shrinking snowpack will affect California's water supply, hydropower and flood control systems, which all depend on winter precipitation being stored as snow and a slow release of water in spring as snow melts. With more precipitation falling as rain and earlier runoff, ["snow droughts"](#) will have major effects on the management of surface reservoirs.*
- *Shorter and more intense wet seasons and more volatile precipitation – with wetter wet years and drier dry years – will make it harder to manage the state's water system for competing needs.*
- *Rising seas increase the likelihood of saltwater intrusion in coastal aquifers and estuaries, including the Sacramento-San Joaquin Delta, and decrease freshwater supplies.*

*At the Public Policy Institute of California Water Policy Center, we assembled a team of 30 experts in climate science, hydrology, ecology, engineering, economics and law to review the weak points in the*

California water system and [recommend actions](#) to build its climate resilience. We focused on managing water scarcity because drought – more than any other aspect of California’s climate – will test the vulnerabilities of the state’s water supply system. [Our findings](#) use lessons learned from the unusually hot drought of 2012–16, which foreshadows the type of drought that will become more common with climate change.

### **The 2015 Snowpack**



Frank Gehrke, chief of the California Cooperative Snow Surveys Program for the Department of Water Resource, carries a snow pack measuring tube as he does a preliminary walk around the meadow where the snow survey is held near Echo Summit, Calif., Wednesday, April 1, 2015. Gehrke said this was the first time since he has been conducting the survey at that he found no snow at this location at this time of the year. (Photo: Rich Pedroncelli, AP)

## **A Log-jam Broken. Or, At Least Some Water Shall Flow**

### ***Federal water bill aims to smooth project funding***

Issue Date: [September 19, 2018](#)

By Christine Souza

<http://agalert.com/story/?id=12175>

*Plans to increase California water storage capacity received a boost from passage of bipartisan, comprehensive water resources legislation in the U.S. House of Representatives. The bill, which the House approved last week, is expected to garner Senate passage and President Trump's signature.*

*California Farm Bureau Federation President Jamie Johansson called the congressional action to help secure added funding for water infrastructure "critical," especially as California faces new state groundwater management requirements and the possibility of reduced flows in certain rivers and streams.*

*The House legislation, known as America's Water Infrastructure Act of 2018 or AWIA, contains language by Rep. Jeff Denham, R-Turlock, that would provide a new tool for financing and building Central Valley water infrastructure.*

*"Under this bill," Denham said, "the new water act will set up a bank of financing for these water-storage projects and we can finally get some of these big reservoirs underway—raising Shasta, building Sites Reservoir, expanding Los Vaqueros, building Temperance Flat."*

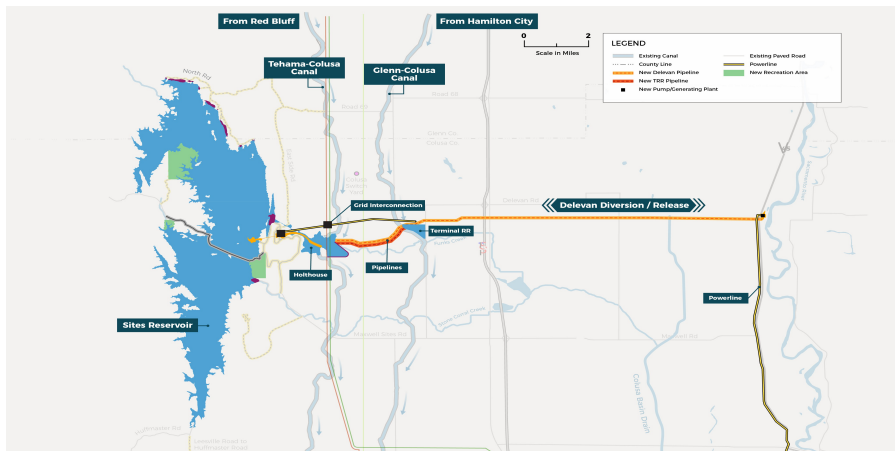
*"It is a bipartisan compromise and includes basic provisions from those three pieces of legislation," Huston said. "The Senate is expected to vote on what the House passed without any amendments and it will go to the president for his signature."*



The AWIA also includes provisions that will support local irrigation districts and water agencies in their efforts to raise spillway gates, build new water-storage facilities, and repair and expand dams, reservoirs and other water projects. In addition, Huston said, the Denham language included in the bill would improve flood protection for San Joaquin Valley residents.

Specifically, the AWIA includes legislation introduced by Rep. Jim Costa, D-Fresno, that will enable the Merced Irrigation District to take the first steps forward with a project to raise the spillway gates at New Exchequer Dam. This would enlarge the storage capacity of Lake McClure, increasing water supplies for eastern Merced County up to 57,000 acre-feet.

"This legislation creates a pathway for the first new surface-water storage in the valley in decades," Costa said.



The Proposed Sites Reservoir (<https://www.sitesproject.org/>)

## **Reps. Denham, Costa bring water storage to the Valley**

ANGELINA MARTIN

Turlock Journal

Sept. 18, 2018

<https://www.turlockjournal.com/news/local/reps-denham-costa-bring-water-storage-valley/>

The last large-scale water storage facility to be built in California was constructed in 1979, and now, almost 40 years later, the drought-stricken state will receive funding for projects to help secure its water supply thanks to two local representatives.

Valley Congressman Jim Costa (D-Fresno) and Jeff Denham (R-Turlock) made sure that America's Water Infrastructure Act, which passed the House last Thursday, included provisions that will support local irrigation districts and water agencies in their effort to improve and expand water projects throughout the state.

Through language from Denham's New WATER Act, which authorizes a pilot project to help finance development of water infrastructure and was included in the WRDA bill, local irrigation districts will be able to apply for low-interest federal loans from the Environmental Protection Agency to finance new reservoirs, below ground storage projects, recycling and desalination projects.

"This bill revitalizes our waterways, bolsters flood protection and ensures our channels and harbors supply America and the world with goods," Denham said of the bill while speaking on the floor before its passage. "But most importantly, this bill includes my New WATER Act, a provision that will help us to build new water storage in California."

*Speaking to his colleagues in Congress, Denham pointed out that California's last large-scale water storage facility was built in 1979.*

*"We've waited 50 years! 50 years because we don't have federal financing and federal authorization. Finally, under this bill, the New WATER Act will set up financing for these new water projects and we can finally get some of these big reservoirs underway."*  
Congressman Jeff Denham

*"We've waited 50 years! 50 years because we don't have federal financing and federal authorization," he said. "Finally, under this bill, the New WATER Act will set up financing for these new water projects and we can finally get some of these big reservoirs underway."*

## **And, Another Shot Is Fired in the California Water Wars**

Just in today is this item from the Brown administration claiming that the Delta tunnels will be an economic win for everyone. Next week, I am sure, this will be attacked by the opponents. Stay tuned.

### ***THIS JUST IN ... DWR releases economic analysis showing value of investing in WaterFix***

*[September 20, 2018 Maven Breaking News](https://mavensnotebook.com/2018/09/20/this-just-in-dwr-releases-economic-analysis-showing-value-of-investing-in-waterfix/)*

*<https://mavensnotebook.com/2018/09/20/this-just-in-dwr-releases-economic-analysis-showing-value-of-investing-in-waterfix/>*

### ***The benefit-cost analysis shows water users will see benefits far exceeding costs, state says***

*From the Department of Water Resources:*

*Today, the Department of Water Resources (DWR) released a [Benefit-Cost Analysis](#) for California WaterFix by Dr. David Sunding, a professor of natural resource economics at UC Berkeley, that finds WaterFix could bring billions of dollars in benefits to Californians who obtain their water from participating State Water Project (SWP) contractors. These benefits include improved water quality, more reliable water supplies, enhanced disaster preparedness, and climate change resilience.*

*"The analysis described in this report demonstrates that investment in the California WaterFix results in positive net benefits for the SWP urban and agricultural contractors," Sunding wrote in the report prepared for DWR.*

*The economic analysis summarized in the report goes beyond what is legally required for WaterFix and is consistent with methods described in the department's ["Economic Analysis Guidebook."](#)*

*The analysis concludes that the WaterFix benefits to SWP water agencies are substantial. SWP urban agencies could see about \$3.1 billion in net benefits. SWP agricultural agencies could see about \$400 million in net benefits.*

*"Without WaterFix, State Water Project contractors will see the continued deterioration of*

*their water supply reliability,” Sunding said. “This analysis shows there is substantial benefit for both urban and agricultural water users throughout the state, and that the project will be more affordable for consumers than local alternatives such as desalination and recycling.” He added that the analysis also indicates that “CVP south of Delta contractors would realize positive net benefits were they to utilize and pay for access to the new north Delta conveyance facilities.”*

*The report compared the benefits and costs of WaterFix in relation to what would likely occur if WaterFix were not built, including further restrictions on existing SWP and CVP operations designed to minimize harmful reverse flows and protect species.*

*A notable feature of the report is that it monetizes the cost of climate change impacts and the benefits of offsetting those impacts. “WaterFix helps mitigate the impacts of climate change on the state’s water supply system,” Sunding said. “This feature of the WaterFix alone is worth several billion dollars and is an important rationale for implementing the project.”*

*The economic analysis is available [here](#). More on California WaterFix is available [here](#).*

## **And More From the Water Wars**

### ***West Side ag could be hit hard by water plan***

#### ***Second, lesser-known phase of controversial proposal has greatest local impact***

*Sep 13, 2018*

[http://www.westsideconnect.com/news/local\\_news/west-side-ag-could-be-hit-hard-by-water-plan/article\\_e437fbd2-b78c-11e8-b53d-fb7d09c17a34.html](http://www.westsideconnect.com/news/local_news/west-side-ag-could-be-hit-hard-by-water-plan/article_e437fbd2-b78c-11e8-b53d-fb7d09c17a34.html)

*A state agency is expected to reach a decision Nov. 7 on its controversial plan to increase flows in three tributaries to the lower San Joaquin River - a controversial proposal which opponents contend would bring devastating consequences to Northern San Joaquin Valley farming operations and communities.*

*The highly-publicized state water board proposal to impose average unimpaired flows of 40 percent on the Tuolumne, Stanislaus and Merced rivers has been closely watched by ag interests, water agencies and environmentalists alike.*

*That proposal would impact east side communities and agencies most dramatically, local water officials recently told Mattos Newspapers - but a second, lesser-known phase to the plan could have the same impacts on West Side agencies.*

*Chris White, general manager of the Central California Irrigation District, and Anthea Hansen, who manages the Del Puerto Water District, said that the proposed second phase of the plan to restore fisheries and the overall ecosystem of the Sacramento-San Joaquin Delta would impose flow requirements on the Sacramento River. The unimpeded flow standards restrict the ability of agencies to store water in reservoirs for ag and other uses.*

*According to a document on the state water board website, the board staff report is expected propose a starting point of 55 percent unimpaired flow on the Sacramento River, with a potential variance within 45-65 percent. The river is a primary source of contractual water supply for the Central Valley Project and agencies such as CCID and Del Puerto.*

*“Phase I is what they had the hearings over and only involves the east side,” White explained. “In Phase II, they are going to try to accomplish a similar type of plan on the Sacramento. The net result of that is a reduction on both the San Joaquin and Sacramento rivers for use by consumers. That has a direct and significant impact on the Central Valley Project and its operation.”*

*“What they are proposing on the Sacramento and its tributaries is a higher unimpaired flow percentage than on the east side. It would not be acceptable,” said Hansen. “Potentially it could devastate us. It could really impact districts like Del Puerto, which do not enjoy a higher priority of water rights south of the delta.”*

*The proposal, she estimated, could reduce the volume of water delivered to south-of-the-delta users by two million acre-feet a year.*

## **The U.S. Defense Industrial Base Depends Upon Russian Space Technology**

Sept. 15 (EIRNS)--It's not just rocket engines that the U.S. space industry depends upon Russia for. An article in Forbes Sept. 13 details the fact that less than 20% of the in-space electric propulsion units used in American-made satellites to maneuver them to keep them in their proper orbit, are made in the U.S. The rest are imported, mainly from Russia, largely because these offshore ("subsidized," Forbes says) suppliers are cheaper. The space systems dependent upon these Russian units include American commercial communications satellites, as well as those made for NASA and the military.

This coming week, the article reports, the administration is expected to release its assessment of the U.S. industrial base. "Early indications are that it will contain disheartening details about how America is losing ground across a wide range of high-tech industries," Forbes previews. As regards the electric propulsion technology, the article states that Russia's technology is "leading edge," simply because it "spent more time and money on the technology."

There is another concern in this particular case, in addition to the U.S. losing the technological edge and the commercial market. In-space propulsion has applications not only in "station keeping," to keep satellites positioned where they belong, but "increasingly, it will be used to maneuver satellites being threatened by countries such as Russia and China," says the Forbes article. This capability, to maneuver satellites on orbit, demonstrated recently by China, is considered one of the greatest potential threats to U.S. satellites.

The operative question is what the report will propose to regain technological advancement in the industrial-base sector of the economy.