

## The Current Megadrought Could Rank Among the Worst in the Last 1200 Years

The Western United States and Northwestern Mexico are in a climate-driven megadrought which has the potential to become one of the most severe droughts in the last 1200 years, according to a new study from Columbia University.

“We now have enough observations of current drought and tree-ring records of past drought to say that we’re on the same trajectory as the worst prehistoric droughts,” said A. Park Williams, a research professor at Columbia’s Lamont Doherty Earth Observatory. “And climate change did contribute in some important way to making it worse.”

The researchers concluded that since 2000 the West has had one of the driest 20-year periods in history. There have been some wet years in that time frame, as we saw in 2019. But overall, the lack of precipitation and higher temperatures are diminishing water supplies and increasing fire hazards.

The study was conducted in nine western states from Montana to the Mexican border and in part of northern Mexico. They analyzed 1,200 years of

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Tim Viall (center), founder of the American River Bike Patrol, rides the trail with Rich Fowler (left) and Dr. Jim Margolis (right).

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## A Bicycle Patrol is now Rolling Along the Lower American River

BY STEPHEN GREEN

In early July, bikers with distinctive red jerseys began patrolling the entire length of the American River Parkway from Beals Point to the confluence with the Sacramento River.

They are members of the American River Bike Patrol (ARBP) – volunteers who have received training in first aid care, cardio-pulmonary resuscitation, emergency bike repair, bike patrolling and rules that Parkway visitors are expected to follow. By July 25, the patrol had 50 trained volunteers.

“We’re not law enforcement,” said ARBP Patrol Representative James Cheng. “We’re recreational cyclists who are there solely to help the eight-to-ten million cyclists, walkers, joggers and rollerbladers who use the Parkway each year, should they be injured, have a flat tire or just need directions.”

The ARBP is affiliated with the National Ski Patrol which has some 640 ski units nationwide and 45 bike patrols on alpine trails and in urban areas. They established the Parkway patrol with the approval of the Sacramento County

Board of Supervisors and the Folsom Lake State Recreation Area.

Efforts to establish the ARBP got underway last year after Tim Viall and his wife moved to the Sacramento area. Viall had a career in newspaper advertising, including a stint at the Sacramento Bee. He is a 37-year veteran of the National Ski Patrol and calls himself “a semi-serious cyclist.”

Viall first approached the American River Parkway Coalition where he found considerable interest in establishing a bike patrol. He then began working with stakeholder organizations, including Save the American River Association, and county and state officials. Viall was joined in the effort by Dr. Jim Margolis, a National Ski Patrol veteran and avid cyclist Rich Fowler. They also began recruiting bikers and providing training.

“Along came COVID-19, and suddenly our medical and first-aid trainers became some of the first in the National Ski Patrol nationwide to develop on-line training using the best COVID

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## Bike Patrol

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precautions and common-sense solutions,” Viall added.

The patrollers establish their own schedules on the Parkway and post them on a website. At the end of their shift, they post a report of their activities. They are asked to spend at least 48 hours annually patrolling the Parkway. But most will average 100 hours, Viall said, and some will spend 200 hours or more.

Most of their contact with Parkway-users involves people who are not following rules such as walking facing oncoming bike traffic on the main bike trail. If they see someone riding a bike on a horse trail, “We introduce ourselves and tell them that bikes are to remain on the paved paths,” Viall said. “Usually they say they didn’t know that.” If they witness more serious offenses, they report it to rangers or fire agencies.

Viall and his colleagues are looking for more volunteers to join the patrol. For more information about the American River Bike Patrol, visit: [AmericanRiverBikePatrol.org](http://AmericanRiverBikePatrol.org). ■



*“Life is like riding a bicycle. To keep your balance, you must keep moving.”*

ALBERT EINSTEIN, A BIKER

## Megadrought

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tree-ring data, modern weather observations and climate models.

From the tree-ring data, Williams and his colleagues found dozens of droughts in the region beginning in 800 AD. Four of those droughts were megadroughts which lasted for a number of years. They occurred in late 800s, mid-1100s, early 1200s and the late 1500s.

The megadrought we have experienced since 2000 was more severe than the first three megadroughts and could match the worst one which occurred from 1575 to 1603.

Williams noted the climate change has boosted temperatures in the West by up to 2.2 degrees Fahrenheit in the past 20 years and are projected to keep rising. Warmer air holds more moisture which is being drawn from soils. That increases the fire danger in the West and can cause die-off of natural habitat and forests – especially in headwater regions.

The researchers can’t predict how long the current megadrought will last. Some droughts have lasted for decades.

Jeff Lukas, a research scientist at the University of Colorado, said he is seeing increasing efforts among elected officials and water project managers to pursue projects and policy changes to address the issues caused by increased drought. But those efforts are being hampered by the fact that “climate change has become a highly partisan and divisive topic in this country,” he concluded.

In California, where the water wars are as old as statehood, the response

*The megadrought we have experienced since 2000 was more severe than the first three megadroughts and could match the worst one which occurred from 1575 to 1603.*

has been positive in some areas. But state and federal officials are now dealing with an unprecedented global pandemic and many water issues have been put on hold.

Little progress, for example, has been made in regulating the over-drafting of groundwater which has been going on for decades. Fracking has been stepped up in recent months. Efforts to voluntarily idle agricultural land in order to save water are making little progress. Revised rules released in March for the export of Delta water under the California Endangered Species Act are being challenged in court by environmental and fishing groups. No progress has been made in revising old water rights. Some agencies, such as the Sacramento Municipal Utility District, have rights to American River water that they don’t use. Rather than give up the water right, they are trying to sell it to other water agencies.

Meanwhile, the megadrought goes on.

The Columbia University study is titled: “Large contribution from anthropogenic warming to an emerging North American megadrought.”

It can be found on Lamont Doherty Earth Observatory website:

[www.ldeo.columbia.edu](http://www.ldeo.columbia.edu) ■

## Sites Reservoir Project is in Trouble

**W**e're Shocked! Shocked!

The proposed Sites Reservoir project in a remote Colusa County valley has run into financial trouble.

The Sites Project Authority is now scaling back the size of the project, reducing projected costs from \$5.1 billion to \$3 billion. The size of the reservoir will shrink from 1.8 million acre feet to 1.5 million acre feet. Plans to build an 18-mile pipeline from the Sacramento River to the reservoir have been scrapped. Existing canals would be used instead. A hydro-power pumping station also was eliminated. The amount of water the reservoir was projected to deliver annually has been cut from 505,000 acre feet to 243,000 acre feet.

Twenty one agencies have given the Site Project Authority \$27 million for planning and studies. The Authority is to receive \$816 million from Proposition 1, a bond issued passed by voters in 2014, and the U.S. Dept. of Agriculture has loaned the Authority \$439 million. Authority officials hope to get more federal loans and money from California water agencies.

That the project is being scaled back is no surprise. And the decision raises questions as to whether the project is still viable. Proposals to build Sites Reservoir have been put forth since the 1940s and none have gotten past a drawing board. Even Don Hodel, President Ronald Reagan's Interior Secretary, said the Sites Project will never pencil out.

Sites would add about one percent to the state's reservoir storage capacity. And since it would be a pump-storage reservoir (with water diverted from the Sacramento River) there would be no water to pump into the reservoir

during periods of extended drought such as the one we are now in.

There are better alternatives for increasing California's water supply. An economic analysis by EcoNorthwest concluded that retiring and curbing water rights for 300,000 acres of contaminated land being farmed in the San Joaquin Valley would cost upwards approximately of \$1 billion.

That is a reasonable price to pay to stop the poisoning of California's environment. In addition, retiring the land would free up to 455,000 acre-feet of water annually. That is a vast amount of water. The City of Los

Angeles, in comparison, uses an average of 587,000 acre-feet per year.

Farmers whose lands are retired deserve compensation. And while \$1 billion is a substantial sum, it compares favorably when the cost of other projects for managing California's water supply are considered.

Sites would be at least three times more costly.

Many growers are producing unsustainable crops on those contaminated desert lands. Their fields and orchards release drainage contaminated with selenium, salts and other wastes that impact wetlands, poison fish and wildlife and their habitats on both public and private lands. Drainage also has caused salinization of bottom-land soils and aquifers.

The disastrous consequences of industrial-scale cultivation of contaminated lands became obvious in 1983, when thousands of migratory waterfowl, including ducks and geese, were deformed or killed outright at Kesterson National Wildlife Refuge in Merced County due to deliveries of toxic drain water from corporate farms.

That huge environmental scandal was exposed by Felix Smith, a U.S. Fish and Wildlife Service biologist at the time, who now serves on the Board of the Save the American River Association.

Federal and state officials have been aware of the drainage problems for decades and have done little to prevent the continuing harm to the Public Trust resources. ■

*Proposals to build Sites Reservoir have been put forth since the 1940s and none have gotten past a drawing board.*





# This is a Big Year for Toxic Algal Blooms

“Today, our fear is that this year’s harmful algal bloom crisis seems bigger than anything we have seen in previous years,” warned Barbara Barrigan-Parilla, executive director of Restore the Delta.

The warming climate and low water flows have spurred toxic algal growth in some California reservoirs, lakes and waterways. The state Dept. of Water Resources (DWR) has been posting warnings near some water bodies and urging swimmers and boaters to take the necessary precautions and stay away from algae. While some algae are harmless, certain types can produce toxins that can make people and animals sick. There is no way to tell if an algal bloom is toxic just by looking at it.

DWR has issued the following advisory on the algal bloom threat:

## What are signs of Harmful Algal Blooms (HABs)?

- Small blue-green, green, white, or brown particles in the water
- Streaks in the water that look like spilled paint
- Mats, scum, or foam at the surface or along the shoreline
- Can have an odor described as gasoline, septic, or fishy

## What are the Dangers?

- Some algal blooms can produce toxins that are harmful to people and pets
- Dogs and small children are most likely to be affected by HABs due to their smaller body size and

probability to play in the water for longer periods

- Exposure to toxic cyanobacteria, can cause eye, nose, mouth or throat irritation, headache, allergic skin rash, mouth ulcers, vomiting, diarrhea, and cold- and flu-like symptoms

## How can I be exposed to algal toxins?

- People can be exposed to the toxins during swimming or other water contact and when they accidentally swallow lake water
- During waterskiing and jetskiing, the toxins can become airborne and be inhaled
- People can also be exposed to toxins by eating shellfish and fish from affected waterbodies
- Dogs or other animals can become ill if they eat scum or mats in the water or on the shore, drink the

water, or lick their fur after going into the water

## What precautions should I take if I see a potential HAB?

- Follow all posted advisories
- Stay away from algae and scum in the water and on shore
- Watch children and pets closely
- Do not let pets and other animals go into the water, drink the water, or eat scum and algal accumulations on the shore
- Do not drink the water or use it for cooking
- Wash yourself, your family, and your pets with clean water after water play
- If you catch fish, throw away guts and clean fillets with tap water or bottled water before cooking
- Avoid eating shellfish from affected areas ■



Algae washes up in The Delta

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SARA appreciates the support of our generous members. Without your support, SARA would not be able to continue our role as *Guardians of the American River and Parkway since 1961*. New and renewing members are listed in *RiverWatch* according to their preference (indicated on the SARA membership/renewal form).

## In Memoriam

Save the American River Association has received a donation honoring the memory of the following friends:

**JIM LIVINGSTON**

**REVEREND RAY SCHWARTZ**

**JACK SOHL**

**MARGE STOTENBERG**

**PHYL ZEINER**

Save the American River Association frequently receives donations in memory of lost loved ones, many of whom were users and supporters of the American River Parkway. Some donors give names. Others prefer to remain anonymous. SARA notifies family members when donations are made.

The money is used to further SARA's advocacy work on behalf of the Parkway. Contributions may be made by check or online via SARA's website.

SARA also has a Legacy program. For information on the program, please call the SARA office (916) 936-4555. ■

## Sierra Alligator Lizards Thrive in the Parkway

One of the fastest-moving reptiles on the American River Parkway and in nearby neighborhoods is the Sierra Alligator Lizard (*Elgaria coerulea palmeri*). They are active during the day and often can be seen moving in a snake-like, undulating motion near grassy areas, under brush and around rocks and logs.

The lizards can range in length from 8-to-17 inches. The bodies are slim with short legs and a tail that often is as long as the body. If being chased by a predator, they can break off their tails as a defensive tactic. The tail will writhe around for several minutes, long enough to distract the hungry predator. The tail grows back, but generally is not as perfect as the original.

There are olive brown scales on the lizard's back and the underside is yellowish or greenish. A band of small granular scales along the sides of the body create a fold that allows the body to expand and hold food or live young. The fold contracts when the extra capacity is not needed.

The lizard's range is along the Sierra Nevada foothills from Plumas County to Kern County. Although they generally spend most of their time on land, they can climb and even swim. When winter comes, they tend to be inactive.

During the spring/summer breeding season, a male lizard grabs on to the head of a female with its mouth until the lady is ready to let him mate with her. They can remain attached that way for hours, almost oblivious to their surroundings. After mating, the lady carries her young inside until they are fully formed. They are born alive between June and September. The newborns are thin and with smooth shiny skin and a plain tan, light brown or copper colored back and tail.

The lizards are predatory. Their diet generally consists of insects, very small reptiles, slugs, worms and roadkill. ■



Sierra Alligator Lizard (*Elgaria coerulea palmeri*)

*"If you want to make a study of western history, western culture, western society, western economics, politics, everything else these days, I think you start with water. And you might end with water."*

WALLACE STEGNER



## Congress is Considering Gutting NEPA

The Trump Administration has proposed major changes to the National Environmental Policy Act (NEPA) that would severely limit the ability of people and organizations to challenge projects that would damage the environment.

Since President Richard Nixon signed NEPA into law in 1970, the act has served as the cornerstone for environmental protection. It has been the nation's most important law protecting public health and the environment including the water we drink and the air we breathe. NEPA also protects the rights of communities to participate in decisions that affect local health and quality of life.

If an agency wants to dam a river or build a highway through a wilderness area, public comment must be sought and considered before the project is approved. The same is true if a company wants to build a polluting manufacturing plant next to a neighborhood. But that would no longer be required if NEPA is amended.

Agencies responsible for approving a project would not have to provide public notice that a proposal has been made. The agencies could

ignore public input in many cases. And they would not have to determine if the project would have an impact on climate change.

Of all the actions the Trump Administration has taken to eliminate protections for public lands, the NEPA rollback proposal may be have the worst long-lasting impacts.

The NEPA rollback fits neatly into the Administration's anti-transparency, anti-science and energy dominance agenda. It also would leave frontline communities exposed to harm – communities that are predominately people of color, indigenous or low-income.

Fortunately, California has enacted its own environmental protection laws. The California Environmental Quality Act will still be in place. But many other states have no such laws. In addition, there are efforts in every session of the California Legislature to gut the California Environmental Quality Act.

Save the American River Association urges you to contact your elected representatives in Congress and urge them to oppose any changes to NEPA. ■

*Of all the actions the Trump Administration has taken to eliminate protections for public lands, the NEPA rollback proposal may be have the worst long-lasting impacts.*

## Support County Parks — Buy An Annual Pass

The Pass pays for itself in 10 visits and all funds go directly towards maintaining and operating the 15,000-acre system. For as little as \$50 per year, you can have unlimited access and parking in the parks.

Pass holders receive free daily entry into Regional Parks and annual passes are valid for one year from date of purchase.

### Pass Fees Are Based On Use:

Vehicle:	\$50
Vehicle + Trailer or oversized vehicle (over 22 feet):	\$100
Vehicle + Horse trailer:	\$75
Vehicle and small watercraft:	\$80
Parks supporter pass*	\$50

*\* This pass is for those who want to support Parks but do not drive to Parks facilities*

### Where to Purchase Your Parks Pass

- Online through the American River Parkway Foundation Web site [arpf.org/visit](http://arpf.org/visit)
- At REI stores in Sacramento, Roseville and Folsom
- Patriot Cycles in Fair Oaks
- Effie Yeaw Nature Center at Ancil Hoffman Park
- Regional Park offices and park kiosks
- American River Parkway Foundation office at the William B. Pond Recreation Area ■



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River and Parkway Since 1961*

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