Central California’s water woes:

“THIS IS A STORY ABOUT MOTHER NATURE, AN UNSUSTAINABLE WATER SYSTEM AND VASTLY DIFFERENT PERSPECTIVES ABOUT WHO IS BEING ASKED TO MAKE THE GREATEST – AND MOST UNFAIR – SACRIFICES.”

On a white hot August afternoon, farm kids gather in the cool glare of an overhead lamp at King’s Boxing Club in Avenal. They come for the boxing lessons and a cold drink of water and to escape from the fields as did Jose Ramirez, their role model and mentor.

Now considered a genuine contender for the Light Welterweight boxing championship, the strapping 22-year-old Ramirez is undefeated in 13 professional fights. On Oct. 25, at a sold-out Selland Arena, he won the vacant North American Boxing Federation junior welterweight title, just 50 seconds into the first round, by stunning David Rodela with a flurry of left jabs and a laser-guided left hook. He named it “Fight for Water-3.”

“My dad came here to work the fields at 16. We’ve always worked in ag,” Ramirez says. “This is a part of me. This is who I am, and when I see my friends and families suffering, losing their jobs because of the drought, I want to help.”

The charismatic young fighter has become a symbol for the underdogs in the water wars, which have raged in California for more than 100 years.

“Boxing has brought me to the table. I have to continue to be the voice of all those people through the Latino Water Coalition and through my fights,” Ramirez says, referring to the organization that was formed in 2007 by mostly Latino farmers and farm workers to advocate for common sense and effective long-term solutions to the state’s water crisis.

Late in September, just days before the municipal water supply would have run out, Ramirez’s small farming town on the western edge of Kings County got some good news for a change: The Bureau of Reclamation agreed to supply Avenal with an emergency allotment of 450 acre-feet of water from the San Luis Reservoir’s meager supply – enough to get them and the nearby Avenal State Prison through this March when annual allocations are announced.

Avenal, which has practiced strict water conservation measures since 1935, is wholly dependent upon water from the state and federally managed Central Valley Project.

However, last year surface water allocations from federal water reservoirs were squeezed to a trickle by four years of what many now recognize as the worst drought in California history.
WIDESPREAD TRIALS AND HARDSHIPS

The people in Avenal are not the only ones suffering. The entire state has been affected by a drought with no memory, no conscience, no scruples and no mercy. In Central California alone, tens of thousands of jobs simply evaporated into the hazy summer sky. A half million acres of the nation’s most productive farmland have been taken out of production. Green trees, lawns and landscapes have been repainted an awful shade of brown in thousands of neighborhoods and public areas. California’s economy suffers a $2.2-billion dollar hit each year the drought drags on. (See By the Numbers).

Recent rains, while welcome, are projected to do very little to improve the overall situation. As reported by the Associated Press, state experts believe 75 inches of rain would need to fall during the next eight months for the state to recover from the current crisis – an improbable prospect, to say the least.

“We had better start acting as though this is not an unusual event, but in fact, is the new normal,” says Peter Gleick, president of the Oakland-based Pacific Institute, an organization that was founded in 1987 to address water shortages, habitat destruction and global warming through interdisciplinary research while advancing environmental protection, economic development and social equity. “There is no longer enough water to go around to meet everybody’s demand for everything they want in California.

“And I think we can no longer assume that the traditional solutions are going to bail us out.”

This is a story about Mother Nature, an unsustainable water system and vastly different perspectives about who is being asked to make the greatest – and most unfair – sacrifices. Public debate tends to be polarized into two camps, with farmers, municipalities and commercial water users on one side and environmentalists and various federal and state agencies on the other.

“I think almost everybody on the agricultural side, the urban side and the environmental side sort of see a train wreck coming,” says Jay Lund, director of the Center for Watershed Science at UC Davis. “And they’ll always blame different people for it.”

Mostly, this is a story about how those most affected by the water shortage are experiencing the crisis in deeply personal ways, often with as much anguish as anger. Perhaps nowhere is that more apparent in Central California than among the region’s farmers.
“JUST LIKE HEAVEN. EVERYBODY WANTS A LITTLE PIECE OF LAN’. I READ PLenty OF BOOKS OUT HERE. NOBODY NEVER GETS TO HEAVEN, AND NOBODY GETS NO LAND.”
–John Steinbeck, The Grapes of Wrath

Eighty-five years ago, the Dust Bowl and the Great Depression pushed many families out of Oklahoma and Texas to what they saw as the Promised Land: the San Joaquin Valley. Today, the mega-drought threatens to shove many of them back to where they came from.

“There are three things that come together to make this valley utterly unique, the finest agricultural district in the world,” explains dairy farmer Mark Watte of Tulare. “First, length of growing season and predictability of weather. Second, generally good soils throughout. And, third, water. Historically, we’ve had all three in abundance and that allowed us to become the world’s top producer of food and fiber in many, many categories.”

Watte’s face darkens slightly as he continues. “In many ways, this really is the Garden of Eden, but political and environmental overreach are about to throw us off the land,” he says. “I truly believe that some people want this rich farming heritage to simply go away.”

On the west side of the San Joaquin Valley from Los Banos to the Kettleman Hills, rancher Shawn Coburn points to occasional patches of green in an ocean of burnt umber.

“Everything you see along here that’s green is being grown with well water,” Coburn says.

Hundreds of thousands of acres of highly productive farmland lie dead and dry and deserted, taken out of production for lack of surface water. He is one of many who believe the current troubles are “man-made,” an unintended consequence of water-hungry environmental programs.

“If they had run the pumps one week longer we’d have gotten an actual water allocation this year,” Coburn says. He’s referring to the gigantic state and federal pumps near Tracy, part of the Central Valley Project, which are intended to move water from the Sacramento-San Joaquin River Delta into the California Aqueduct for delivery in the southern two-thirds of the state.

Increasingly in recent years, these pumps have been restricted by court rulings favoring fish habitat and river restoration environmental projects. Only three times in the last 20 years have Westlands Water District customers, like Coburn, received their full contractual allotment of water.

“Instead, bureaucrats stubbornly refused to run the pumps even though the regulations would have allowed it. As a result, in late March (2013), another 300,000 acre-feet of water just flowed right out to the ocean, of no beneficial use to anyone,” Coburn says. “Incredible.”

In December 2012 and January 2013, another 812,000 acre-feet of water went straight to the ocean for the same reason.

These days, Coburn and countless other farmers spend most of their waking hours frantically looking for water.

“Back in May, a friend of mine was completely out of water and was desperate to keep his nut trees alive,” Coburn recalls. “I helped him find 400 acre-feet available in Southern California.
Coburn uses this diesel pumping apparatus for one of many water wells throughout the region. He installed a new 1,200-foot well last summer that cost $500,000. Neighbors are drilling down 2,000 feet to find marginal quality water at a million dollars a hole. The expense of lifting deep water to the surface is staggering — brutish 450-to-650 horsepower diesel or electric motors running full-out cost thousands of dollars a day to operate. Well drilling outfits are booked solid for the next 24 months. If you want a well drilled or re-worked anywhere in the Central Valley, plan on a crew showing up in January 2017. Maybe.

Almond rancher Juan Guadian knows only too well that not all water is created equal. For his 150-acre grove near Manning Avenue and Interstate 5 – all highly efficient drip irrigated – he received virtually no surface water this year.

“We had to pump to keep the trees alive,” Guadian says. “But well water is no good for these trees.”

He points to damaged, unhealthy leaves on his almond trees, a sure sign of salt poisoning.

“Too much boron, too much salts — it fries them,” he says. “These trees are very sensitive. They want cool mountain water.”

Guadian’s harvest was smaller this year and of inferior quality. The buds for next year’s crops are already on the trees. They are puny and sparse and obviously stressed.

“If these trees die, I die,” almond rancher Juan Guadian said. The salty well water he has resorted to using has fried his crops due to boron and salt poisoning. Photo by Bud Elliott

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Nearby, at the sprawling 30,000-acre Harris Farms and Harris Ranch, the water crisis has upset and re-arranged the entire operation. One example: Harris farms simply did

by the numbers

DROUGHT 101

• Eighteen percent of the nation’s GDP depends upon the reliable flow of water to the agricultural industry in California.

• California produces more than half of the U.S. supply of fresh fruit, vegetable and nut crops, dairy products, citrus, melons, premium cotton, wine and table grapes and raisins – more than 350 crops worth $46-billion in all.

• Nearly all of the nation’s tomatoes, carrots, broccoli, almonds, walnuts, pistachios, grapes, olives and figs come from California.

• The last major drought in 1977 was actually drier than 2014. But the effects of the drought are far worse in terms of rain and snowfall on record.

• Up to 800,000 acres of productive farmland in the Central Valley have been fallowed due to the lack of water.

• The economic loss to the overall California economy due to the drought is $2.2-billion per year.

• Tens of thousands of farm-related full-time, seasonal, part-time and allied industry jobs have been lost due to the drought.

• The Central Valley Project began water year 2015 on Oct. 1 with 2 million acre feet of water LESS than the start of water year 2014 at its six major reservoirs.

• The CVP normally supplies water to 3-million acres of farmland in the Sacramento and San Joaquin valleys and Central Coast.

• The CVP also supplies water to 25-million of urban residents from San Jose to San Diego.

• The entire state of California is in severe to critical drought.


• Residential water use varies widely around the state, from a low of 45 gallons per day in Santa Cruz to a high of 385 gallons per day in the Santa Fe Irrigation District.

• Americans flush 5.7-billion gallons of clean drinking water down their toilets every day, more than is used for bathing, cooking, or washing.

• American power plants use 1.5 times the amount of water used by all the farms in the United States.

• Annual water supplies for environmental programs have not been reduced.

• 150 percent of average annual rain and snowfall will be required to re-fill depleted reservoirs.

• The drought is the direct cause of more severe wildfires. The money to fight them was exhausted two months before the end of the last fire season.

• Municipal water supplies have been severely impacted, and in some cases, depleted.

Sources: AccuWeather; California Department of Food and Agriculture; California Department of Water Resources; California Farm Bureau Federation; California Water Alliance; Center for Watershed Sciences, University of California, Davis; Manuel Cunha, president of the Nisei Farmers League; Charles Fishman, “The Big Thirst,” Free Press, 2011; Drought Status Map, Association of California Water Agencies; Dr. Peter Gleick, President and Water Program Co-Director, Pacific Institute; Alan Heathcock, “Matter: Zero Percent Water,” Sept. 2014; Huffington Post, June 15, 2014; Ron Jacobson, General Manager, Friant Water Association; Mother Jones Magazine, April 2, 2014; New York Times, April 20, 2014; Reuters, “Drought forces California farmers to idle cropland,” Feb. 5, 2014; U.S. Department of the Interior, Bureau of Reclamation; U.S. Drought Monitor, July 2014
not plant 3,000 acres of lettuce this year. Lettuce thrives on surface water but struggles on well water. In 2013, Harris Farms supplied lettuce for the entire “In ’N Out” burger chain. This year, nothing. “Nobody’s gonna plant anything right now,” Shawn Coburn says. “They’d be a fool to plant now.”

A LITTLE BOY, MOTHER NATURE AND WATER STORAGE

Every Spring, the federal Climate Prediction Center tries to ascertain the intentions of El Niño, that fickle ghost that sometimes warms an equatorial portion of the Pacific Ocean sufficiently to influence the jet stream that can carry early and substantial rains to California and the West. This year the “little boy” appeared early, then ducked behind a cloud and hasn’t been seen since.

Climatologists do not agree on the exact description of our current dilemma; some say it’s a “100-year drought” and others call it a “12 hundred-year drought.”

David Zoldoske, director of the Center for Irrigation Technology at California State University, Fresno, says simply, “We’re entering Year Four of a 10-year drought. And when people ask, ‘(10 years?) how do you know?’ I reply, ‘Because nobody knows that we’re not.’”

Mother Nature caused the drought, as she always does, by withholding ample rain and snow for a longer period of time than humans find convenient. Then again, she always relents and provides “normal” supplies of water in subsequent years.

“It is our fault and folly not to catch and store that bounty when it arrives,” says Ron Jacobsma, who runs the sprawling Friant Water Authority, supplier of water to 1,500 municipal and agricultural customers. “Year Four of the drought will be calamitous for many sectors of the California economy, unless we get smart and lucky.

“We have to capture the early storms and fill up these reservoirs, because once we get into January, pumping restrictions come in and the water is lost forever, and that will be devastating.”

Zoldoske agrees, but sees another aspect of the crisis.

“The general consensus is that the actual amount of precipitation falling in California won’t change much in the coming years, but, due...
to climate change, it will arrive in the form of rain rather than snow, “he says. “That means faster runoff, not a slow, steady snow melt. And that means we must have more storage. It would be a very wise investment.”

The state’s water system was built four decades ago when the population was about 20 million, notes Aubrey Bettencourt, of the California Water Alliance (CalWA), an organization of roughly 4,000 statewide members of the agriculture and related industries which lobbies for short term relief and long term solutions to the on-going water emergency.

“Today it’s nearly 40 million,” she says, “yet the system of storage and conveyance has not been expanded at all.”

Will the $7.5 billion water bond passed by voters in November address the storage need?

“No, not at all,” says Lund at UC Davis. “Not for this issue.

“This is an issue of both the state and federal agencies as well as the local water districts being prepared to market water across jurisdictions under these kinds of dire circumstances.”

Moving water under any circumstances in California is a complicated process fraught with troubled relationships. The drought has made it worse. Farmers, municipalities and commercial water users all blame various federal and state agencies for incompetence in managing the state’s most fragile resource. Some use a stronger word.

WATER: WHO USES WHAT

Restoring the Delta ecosystem was the purpose of the Central Valley Project Improvement Act, which Congress passed in 1992. The legislation introduced a new, very thirsty water consumer: the environment.

“They’re first in line. They get nearly half of available water right off the top, every year,” says Jacobsma of the Friant Water Authority. “They’ve taken several million acre-feet of water every year for 20 years and yet the fish population hasn’t improved one bit.

“And the Delta ecosystem is no healthier today than it was 20 years ago.”

Of all the struggles over the state’s water resources, none is as impassioned as the one that pits agriculture interests against environmental ones.

Peter Gleick at the Pacific Institute believes blaming the water shortage on environmental priorities is misdirected. “The shortage of water for agriculture is not because of environmental protection; you hear that from some of the lobbying groups in Sacramento. I think that’s misleading,” he says. “The amount of water that has been returned to the environment is very, very small compared to the amount of water that some people argue ought to be returned to the environment.”

Karen Musson of GAR Tootellian, Inc. believes state and federal agencies are mismanaging their authority to operate water resources fairly and effectively. “It is criminal,” says Karen Musson, managing partner of Gar Tootellian, Inc., one of the biggest ag consultancies in the state, “Yes, criminal in that the state and federal agencies with the power and authority to manage our water resources fairly and effectively simply haven’t done so.”

Lund agrees, up to a point. “The regulators are in a terrible position because if they try to be flexible they are always subject to being sued by one of the other sides. If you’re a regulator, a bureaucrat, just doing your job, you’re sort of stuck,” he says. “The safest thing to do is not be flexible.”
Specific amounts aside, records show that agriculture receives less water than the environment. According to the California Department of Food and Agriculture, farmers use about 41 percent of the state's available water (not 80 percent as is often cited by opponents), while environmental programs consume 48 percent. Fresno State's Center for Irrigation Technology reports similar figures: Agriculture accounts for 39.8 percent of water use compared to 49.63 percent for environmental programs and 10.57 percent for all other use such as municipal and domestic water supplies.

In the past, farmers wasted some water through inefficient flood irrigation and other practices, but few appear to be wasting it now. In fact, they are often at the forefront of adopting and promoting water-saving innovations that are in use around the world, from drip irrigation, low flow emitters and super efficient overhead sprayers to recycling, recovery and conservation.

Zoldoske of Fresno State’s Water / Energy / Technology (WET) incubator says drip irrigation alone has significantly reduced on farm water use, but generally at a cost of increased energy demand.

“One big thing being developed is sensor/control technology that will allow growers to micro-manage water delivery to each individual plant, tree or vine, optimizing even more water and energy,” he said. “We like to look at every year as a drought year and plan accordingly.”

People don’t realize that farmers are the original environmentalists, the genuine environmentalists,” Musson says. “We are growing more food on less land using far less water than ever before.”

Manuel Cunha, president of the Nisei Farmers League, shares Musson’s perspective.

“The farming community has done more on water conservation than anybody else could imagine, especially in this state, especially in this Valley,” he says.

“How much more can we do?” he asks. “I guess it’s not to grow any crops at all and not to feed the world.”

Cunha is adamant about agriculture’s contribution to the overall health of the California economy. He points to 2009, a year when agriculture generated $46 billion dollars.

“That $46-billion, as it rolled through the economy, had an impact of $680-billion dollars. Exactly half of the state’s $1.47-trillion economy,” he says. “Why would you shut off the water to such a productive enterprise?”

Others, like farmer Mark Wadde, are asking a more pointed question, “How much water have the environmental programs been asked to do without lately?”

Farmers are becoming increasingly restive over this imbalance and what they view as the arrogance of the regulators and the rule makers who seem indifferent to the absurdity of diverting a million acre feet of cool, clean Northern Sierra snowmelt straight to the ocean, as farmer Shawn Coburn asserts, “To the benefit of no one, simply because at the time (January 2013), the Delta smelt were swimming far from the pumps and not accessible for census-taking and opinion-making.”

Several years ago, Rep. Jim Costa (D-Fresno), California Sen. Dianne Feinstein and others asked the National Academy of Science to review the biological opinions which, in effect, allow various water agencies to divert vast quantities of water for river restoration, fish protection and other environmental uses.

“They pointed out the flaws that existed in the biological opinions which overlooked current science,” Costa said recently. “They were peer reviewed by other real scientists – not a bunch of politicians – and they found that, in fact, the biological opinions are flawed.”

Yet these biological opinions remain the legal lynchpin that holds together the entire federal water regulatory structure which is the cause of such anger and despair.
COMMUNITIES IN CRISIS

An unintended consequence of the drought puts deficiencies in municipal water systems at center stage. The City of Fresno, dreaming of an ambitious $410-million infrastructure upgrade, held public hearings in October to explain the need.

Much of the city’s water pumping and distribution system was installed during Prohibition, when clean, safe water was required for newly-planted lawns and trees in the growing city and for distilling a particularly potent brand of spirits in the tunnels and dens beneath Fresno’s Chinatown. Now those old wooden – yes, wooden – and clay pipes are breaking down in Fresno and cities all over the state, losing millions of gallons of water to seepage, leakage and frequent mainline breaks.

Everyone agrees on the need for the upgrade, but many object to the cost. Lawsuits have slowed the project, which will be funded by rate hikes. More than 70,000 water meters have been installed in Fresno during the past five years, resulting in a reported 25 percent reduction in water use. Still, Fresnans consume far more water per capita than the statewide average.

Seventy-miles southeast of Fresno, 300 domestic wells petered out last summer in East Porterville, leaving nearly a thousand people without drinking water.

“[Well drilling companies] wanted $10,000 to deepen our well,” says Debra Madrigal, whose 50-foot well, operating since the house was built in 1935, went dry in June. “It might just as well have been a million dollars – we don’t have it.”

What she does have is an enterprising husband who rigged up the neighborhood’s first tank-in-a-tree. It’s a 250-gallon fiberglass contraption snuggled into the arms of a sturdy oak tree 25-feet off the ground.

“It looks complicated, but it’s really simple,” Madrigal explains. “My husband brings home water from a relative in Tulare in a 250-gallon tank in his truck. We pump it up to the tree tank. Gravity then feeds water back into the well where the pump pushes it into the house for washing, bathing, toilets, and so on.”

Madrigal says they buy bottled water for drinking and cooking, but for everything else, the tank-in-a-tree “works great.”

The rural towns of Farmersville, Munson, Springville, Lindsay and Terra Bella are also out of water. Their wells have run dry because of heavy pumping from thousands of agricultural, residential and municipal wells scattered along the western slope of the Sierra Nevada Range. So dire is the shortage of clean drinking water that the Red Cross was called several times last summer to deliver emergency supplies. One week before Thanksgiving, at a cost of $30,000 per month, the Tulare County Office of Emergency Services set up portable showers in an East Porterville church parking lot.

For the first time in months, residents could take hot showers.

“It’s because surface water deliveries from the normal water-holding reservoirs have been cut off this year by the feds,” says Jacobsma of the Friant Water Authority.

“For the first time in its 65-year history, Friant water users received exactly no water this year even though they paid for it. People are frustrated and angrier than I’ve ever seen. They’re ready to fight.”

On Oct. 24, the 15,000 clients of the Friant Water Authority, including 21 CVP water districts, filed a lawsuit against the state Water Resources Control Board, claiming it had illegally diverted a
huge pool of water from Millerton Lake to serve environmental programs such as wildlife refuges, leaving cities and towns and farms with nothing. The move was illegal, they say, because the state bullied its way to the front of the line, leap-frogging over senior water rights owners who have valid claims dating back to the mid-1800s.

Exactly one week after the lawsuit was filed against state water regulators, the first substantial storm of the season brought rain and snow to the entire state. It was late Halloween night, long after the trick-or-treaters were home in bed; a soaking, all-night rain event the likes of which had not been seen in many, many months.

ELUSIVE SOLUTIONS AND A SYMBOL OF HOPE

In late autumn, in a rare showing of bipartisanship, both Democrats and Republicans indicated they were quietly nearing agreement on legislation based on a bill authored by Rep. David Valadao (R-Hanford), which was approved last February by the House of Representatives but held up in the Senate. It would begin addressing inequities in the Central Valley Project Improvement Act of 1992. On the table were new water storage projects, limits on certain aspects of environmental protections in the Sacramento-San Joaquin Delta, and removal of certain wild-and-scenic rivers protections in order to move along vital water projects.

Then, A week before Thanksgiving, under pressure from environmentalists, Feinstein abruptly pulled out. Those close to the negotiations, including Rep. Jim Costa, say certain environmental activists, including Senator Barbara Boxer, had reservations about loosening some of the water restrictions under the CVPIA.

“We were 95 percent in agreement,” he says. “We got very close.”

While politicians scramble to re-start the crucial water negotiations as the next session of congress convenes in January, farmers struggle and consumers adjust, and boxer Jose Ramirez continues his meteoric rise. On December 13th, he won his 13th professional victory with a sixth round TKO against Antonio Arellano at the Continental in Las Vegas. Once again he won with a barrage of stinging body blows and incredibly fast and accurate head shots launched mainly from his left hand arsenal.

Two days before the bout, California was visited by a welcome stranger aboard the so-called “Pineapple Express.” A substantial winter storm brought prodigious amounts of rain and snow. Not enough to end the drought of course, but enough to encourage thirsty Californians to fight on.

Jose’s next Fresno bout is scheduled for May 9 at Selland Arena. It will be a sellout. Again, Ramirez will share his name and fame and fortune with those still in the fields. It will be designated “Fight for Water-4.”

“I’m standing up for the people in the only way I can,” Ramirez says. “I fight.”

Bud Elliott retired in May 2014 from a broadcast journalism career that spanned 49 years, including 27 years at KSEE-TV in Fresno. He is currently a freelance writer.