Dear Sir/Madam,

This is my comment letter on revised regulations to meet the drought crisis. Please forward to the appropriate bodies.

We have the opportunity in this drought to make historic changes and improvements in the environment and in water supply reliability. In fact, an environmental disaster can be easily averted and more potable water released for both human and non-human life with aggressive and appropriate actions. But everything can worsen if we insist in "solving" the wrong problems and ignore the truly significant ones.

**Reservoirs and Waterways**

When the State Water Project was built in the sixties and halted in the early seventies, the project was only 60% completed. The remaining 40% left undone were the reservoirs we needed now. Building more reservoirs now will not help if there is too little rain to fill them.

The real issue is the state of the reservoirs now. As the water levels have receded, dry banks are exposed and more and more toxins and pollution at the bottom of reservoirs are concentrated. In most reservoirs the last 10-15% of the water is undrinkable. When they get to this level they are aptly called "dead pools". Our reservoirs are becoming more and more "dead pools". The currently higher reservoir levels understates the crisis as much of the reserves is unusable bottom water.

The toxins are primarily built up fertilizers, biological waster, trash, and poisonous materials long banned such as arsenic, lead, cadmium, chromium-6, etc. In some cases, artificial lakes were only partially dug out leaving rotting trees and other plants that also contaminant.

When rains come, there is the danger that these concentrated toxins will be washed downstream and will kill fish and other wildlife that live there. Further, much of the rain that remains will be polluted and unusable for either potable water use or to maintain natural life.

Rather than treat the low reservoirs simply as a problem, the drought gives us literally the opportunity of a lifetime to undertake a massive clean-up. We should aggressively scrape the exposed bottoms of our dry reservoirs, lakes and channels and eliminate these toxins. Even in drought years, rains do come. With clean reservoirs all the water will be drinkable. We will not poison the environment and be able to clean it up. Further, we can quickly and cheaply expand existing reservoirs without the delays inherent in building anything new and unproven.

The storm water quality control boards have been concentrating their efforts in the wrong areas. They have concentrated their efforts in reducing the drainage of small amounts of new residential pollutants and ignoring the far larger problem of remediating existing waste that has been accumulating for over a century during times when pollution concerns did not exist and the toxins dumped were both more substantial in volume and truly more toxic. These agencies have taken an opportunistic and parochial self interest in expanding their powers while ignoring the much larger problems and the purpose for which they were created.

The voters just passed a large water bond expecting that it would help both the environment and their drinking water. If the State does not address this contamination issue now, an avoidable environmental disaster will occur entirely from negligence of government. The money is there but the present plans look all too much like political milking of mice when the artful and careful taming of gorillas in the room spoiling for trouble is needed.

If we do not clean our reservoirs, and stream beds, lakes and rivers; the next rains will not be a blessing quenching the thirst for a parched land. Instead they will spread the concentrated pollutants in environmental disasters.

Parochial self interest in agencies must not be tolerated. Larger and more urgent problems must be addressed.

Clean the waterways, lakes and reservoirs as a first and urgent step. We have what could be a short breathing spell and chance for constructive change.

**Toxin Management**

With the need of cleaning our waterways, comes the larger issue of waste management. Recycling of waste water in any form concentrates toxicity as the water is removed. We do not have adequate means for treating waste other than shipping it to other states for solid waste disposal or diluting it with water we do not have. We can scrape and ship the toxic waste to an out-of-state site, but to be sustainable, we need more innovative long term solutions. Further, recycling in high-density developments been a success. All means suggested have proven impractical or flawed.. Here is where research is needed.

Another problem with recycling or reclaiming water is that these facilities are expensive and take too long to build. Once built they require 24-hour operation to be practical. That eliminates the use of any significant "renewable" energy sources. In the Vallecitos Water District where I live, the cost of power to the District has gone from 4¢ a kw-hr to 15¢. These costs will go up considerably from carbon taxes. As these processes are heavy users of fossil fuels, they will increase Green House Gasses (GHG) considerably which runs counter to the stated environmental goals of the bond measure.

**Colorado River Supply**

One "invisible" gorilla in the room is the supply of water from the Colorado river. In good, normal years, the total allocations of water amount to 130% of non-drought year flow. San Diego County presently gets 64% of its water from this river. As the drought has progressed, the water is both growing more scarce and like the reservoirs getting more and more salty to the point that local areas already having undrinkable supplies. The Agua Caliente Indian Tribe reasonably refuses to have their groundwater recharged using it.

A related problem not addressed is that there are other customers upstream of us in equally or worse shape. There are also entities that have "senior" or "priority" rights that must be served first often in full with all junior water users reduced to dividing up the reduced supply.

As the drought continues these disparities will grow more pronounced and truly epic problems will occur in these upstream regions and will greatly reduce available water in my County of San Diego. The worst hit first will be Nevada which gets over 90% of its water from the once mighty Colorado. The Nevada main gravity feed aqueduct intake (the "big straw") is at the 1,000 foot elevation. The Lake Mead reservoir is down to the 1,050 foot level and dropping. A new aqueduct at the 950 foot level will help, but if the drought continues according to most long range projections for the next 100-200 years, the situation will be dire and that water source will likely disappear entirely for our state for many years as even drier headwater states are forced to commandeer this water in order to survive. Downstream users such as us could be left with nothing.

Thus new water resources are needed.

Desalinization and Energy Efficiency

Desalinization will help considerably *if done better*. The County of San Diego has taken a long look at the water problems and taken on a $1,000,000,000 desalinization project in Carlsbad. This source will produce virtually no detectable pollution from brine concentrates and inconsequential solid water. That said, a more efficient and cheaper to desalinize water is available. Desalinization and reclaimed water are power hungry operations. Electrical power is the fastest growing component of the cost of water. These operations must be operated 24 hours a day to be practical. SDG&E charges water districts peak hour rates for 20 hours a day. These rates have risen from 5¢ a kilowatt hour to 14¢ and more increases are coming. The drying up of the reservoirs means that many clean hydroelectric plants will be shut down requiring more natural gas production – increasingly imported from dirtier out-of state producers (and increasing our carbon taxes). The new Carlsbad plant costing $1,000,000,000 will use particularly energy-hungry Reverse Osmosis (RO). A much cheaper and environmentally friendlier approach is to recycle the waste

heat from coastal power plants (now just dumped into the ocean or the air) combined with flash distillation – the method used on virtually all naval ships and widely used in the Middle East for their drinking water.

The San Onofre plant produced decades of clean energy. Rather than being shutdown, it can be easily and quickly be converted to desalinization using flash distillation while reducing GHG emissions (and our carbon taxes) while supplying needed water sooner. The problems of generating high-pressure, high temperature steam and for efficient electricity production are bypassed as the lowest quality steam is more important for desalinization.

We have the inconsistent demands for a cleaner environment, more efficient operations, more water and reduced GHG. The RO plants and the refusal to repurpose the San Onofre Plant are counterproductive. Refusal to take the optimum path serves only to degrade the environment, increase costs and reduce quality of life. The only winners are the investor utilities and the State from profitable carbon taxes. Water, health of our society and the environment should be primary concerns.

Non-Competitive Bidding

The Governor's desire to speed up construction is destructive. For this year, he proposes using only 7% of the bond money available. Non-competitive bidding invites overcharging and corruption. It is a big step backwards in good government ignoring the cost benefits of the free market. If he was so concerned about speed, then he should be aggressively starting the project processes now and not waiting forcing non-competitive bidding. Given the urgent need to clean our reservoirs and waterways, his delay in using bond money quickly and effectively is not helpful.

**Natural Balance**

One of the constant themes of environmentalism is the need to maintain balances in urban development and natural cycles. We are in the midst of a natural shift in rain patterns for our State. The National Oceanic and Atmospheric Administration has determined that the current climate change is natural and GHG theorists predict that mega-droughts are on the way in the coming decades. Consequently, if we divert more water into areas that would naturally dry up, we are interfering with nature and can do more harm than good in meddling producing "unintended consequences". In nature, species continually evolve, thrive or die back under changing conditions. Darwin did not say survival of the fittest. He said that the most successful species are those that are most able to adapt to change.

An example of good intentions and poor execution have led to disaster are with the handling of sea otters. Formerly they were kept in check by human harvesting. When illegal hunting depopulated the species to dangerous levels, all hunting was banned. The otter population exploded and it consumed virtually all clam populations harming that species, eliminating a natural food supply, and decimating that industry. The otter overpopulation has continued unchecked and the otters are now forced to eat lower quality shellfish. These are naturally contaminated with poisonous algae. Their livers are becoming mush and they are dying in increasing numbers and the health of the entire population is deteriorating.

Note that in Florida, alligators were similarly being hunted to extinction. They were then protected and their numbers exploded to unnaturally high numbers threatening both human communities and other species. With strictly controlled hunting of the surplus population, the species is achieving a better balance for all parties: the alligators, the human population and other species.

If we assume to protect a species, we must take on the task of controlling its numbers to reasonable amounts. We must also acknowledge the fact that some species naturally go extinct and new ones form. The blind and dogmatic maintenance of all species disrupts the balance of nature. Diverting water to

maintain an unnatural state of pseudo-balance helps neither the environment, many species, nor the economy.

Questionable Environmental Actions

In a drought, saltwater intrusion into the Delta would also occur naturally. Building a barrier in the Delta could be similarly destructive on a natural balance basis, but also as it could become a trap for pollutants washed downstream. If it is to succeed in its dubious attempt to halt the tides, cleanup of the upstream streambeds the causeways must be the logical and necessary first step.

A highly controversial solution to protecting the Delta Smelt was the releasing of water nominally to save this minor species that would have provided all the urban water needs for the entire State. Yet the species is now considered largely extinct despite this hugely expensive and ill-advised means of supposedly saving them. Instead the major cause of extinction now appears to be the wide spread predation of largemouth bass planted in the Delta for sports fishing. Notably, further seeding of high end predator fish is being proposed for storm water cleanup in other areas. Such actions should wait until we have studied the situation with the Delta Smelt first. Inadequately studied and executed plans must be corrected before more mistakes are made.

California is leading the way not in good environmentalism, but incompetent regulatory agencies which are more concerned with public relations and growing budgets than performing its central task. Mistakes must be acknowledged on all sides as unavoidable and as well as the nest for corrections promptly and competently facilitated. The inability of agencies to acknowledge and correct mistakes indicates those agencies must be redirected and restructured to do its job for the public benefit and not be overly concerned with political correctness or its public image.

Proficiency and success must be the hallmark of environmental government. It once was with smog, but it is not so now.

Food and Sustainability

The biggest human use of water is to produce food – about 80% of all legally obtained water in California. A pound of bread (the lowest water user of staple crops) takes 1,607 pounds of water. Rice – the world's major staple - takes 2,490. Growing a pound of almonds takes over 16,000 pounds of water.

You cannot have sustainable communities without food. Food requires water – massive amounts of inexpensive water and energy.

To provide just the basic calories by eating only bread for a family of four for a year takes over 2,920,000 pounds of water.

If agriculture is cut back, food prices will soar and communities become progressively more unsustainable. Water availability is the major limitation growing population on both a Statewide and global scale.

We are likely beyond that limit given drier conditions.

Rather than look to artificial and wildly inappropriate per capita water consumption, we should be computing the maximum carrying capacity of our State to feed and water our citizens, provide proper sanitation and an acceptable quality of life leading to a sustainable path to prosperity for our children and lower income citizens. With a society built on a century of relatively heavy rain and a deep, longer lasting drought at hand, we need better solutions than proposed.

The most responsible approach is to severely limit virtually all large new high-density developments until we have the means to sustain them without needlessly and irresponsibly endangering the environment and impoverishing our society.

**Marijuana**

Another gorilla in the room being ignored is illicit marijuana growing. Dairy products including milk is the second largest agricultural crop in California. Their total value was $ 6,899,743,000 in 2012. The State estimated that in 2010 its most valuable crop was illegal marijuana at around $14,000,000,000.
Marijuana is a heavy user of water – 6 gallons of water per day per plant in humid areas and probably 8 in drier San Diego. Over 1,600 plants can be grown on an acre which will consume 9,600 gallons of water per day – a very heavy use. Not only are the plants massive water users, growers aggressively fertilize them and cover them with insecticides heedless of their destructive runoff to streams. Stealing water to grow these illicit crops has become an industry in itself. Organized crime is reportedly moving in as these illegal California operations as they compete with Mexican growers.
The State has plotted the location of over a thousand sites in just two counties. Three of four watersheds in one county will be completely
dry killing all of its fish or even algae. Less than a few percent are raided each year despite open lawlessness by the failure of the State to enforce its laws against the most vile of gangsters.
The first order of water conservation should be the eradication of illicit growers who are probably the most egregious and largest waster of water and poisoning of the environment. No State can claim to be leaders in sustainable living and clean environment if the majority of its water is being used for recreational drugs. For sustainable living all water must be for growing food – not lining the pockets of criminals.
What is more important for feeding our children and the poor: milk or marijuana.
These is a spirited debate about legalizing recreational marijuana in our State for health and tax reasons. Today's marijuana is 3 to 10 times more potent with recreational high-producing drugs. Illegal drugs often are often laced with stronger drugs, insecticides and fertilizers. The environmentally safer approach is to outlaw water-suing plants except for strictly licensed personal medical use and allow only synthetic cannabis to be used under controlled conditions and appropriately taxed for recreational use. Otherwise, sustainable living and water conservation become a political farces.

Smart Meters and Search Warrants

While the State has turned a blind eye to criminal behavior where it does not need any additional authority to act, the Governor has chosen to treat honest homeowners with a lawn or a leaky toilet as criminals that must be actively pursued and punished with heavy fines. The principle tool of the State to attack minor residential losses is through "Smart Meters".
There are two types of new meters to replace old, inaccurate and worn analog meters: simple digital meters and "Smart Meters". Digital meters record only the monthly totals. A meter reader drives a car otr truck around the neighborhood and the meter reports a single reading. Here is only one data point per month. Yet the meters have excellent displays allowing homeowners and tenants to readily detect leaks. With battery usage, maintenance is minimal. As the cost of water is going up dramatically, this is the only inducement that needs to be employed. "Smart Meters" record and send out data for every small use of water down to less than a quart. They require extensive wireless communication systems, larger servers, extensive data storage, sophisticated software and frequent battery changes. With them the most intimate and private details of citizen lives can be data mined.
The invasion of privacy is an important financial goldmine for big business and the government. At least three companies are lined up to buy this private information. Maximum profitability depends on being able to breach any attempt to maintain anonymity to facilitate focused and intrusive advertising. Of course, the State is in line to sell the information for its own profit offering minor, temporary inducements for permanent loss of privacy. Even in the case that it reluctantly attempts to keep information confidential, the information can be readily hacked. In the event of cyber attacks. Worse access to vital information and control of the citizens' private homes can be seized by foreign enemies. The only safe alternative is not to take the information in the first place and ensure that water cannot be shut down electronically.

Where Government more competent, fair, just and honest and there were no cyber terrorists, these meters would still be a bad idea.
To make matters worse, the Governor clearly intends to extend the power of the State into all private matters as it seeks to empower the issuance of warrants which could be employed against the most minor and insignificant infractions. Further, this authority cn be quickly expanded by dramatically increasing the list of "water wasters" and "inefficient uses" ignoring its ongoing bad record in water management and environmental damage.
in the hands of a government that is more concerned with regulating the life of its honest citizens than enforcing laws against the worst offenders is starkly evident from the imbalance in action and importance. If the Governor wishes to establish a case for invading private homes, it must first fix existing problems in Government mismanagement.

Quantification Time Bomb

California has a mixture of overlapping and even conflicting water rights. There is a major problem in water management and ownership that has been overlooked: Tribal water rights. Indian Tribes are campaigning for more water rights and a right to be "first in line".
The controlling judicial cases concerning Indian Tribe water are ***Winters v. United States***, 207 U.S. 564 (1908) and ***Arizona v. California,*** 373 U.S. 546, 83 S. Ct. 1468, 10 L. Ed. 2d 542 (1963). In ***Arizona v. California***, the Indian Tribes were given a wide latitude in determining what water rights they could have and that these rights were superior to other claims. Most reservations are thinly populated on arid soil. Generally under these rulings , the tribes must not only have sufficient water for their food needs, they were to be allowed to have enough water to develop commercial operations on any arable land they own. There was the recognized need to quantify the extent to these claims for a balance between the needs of large non-Indian populations and the small tribes of Indians. Most states have conducted negotiations with tribes and have established these "quantums". However, California is one of the few states which have NOT quantified these claims.
Further, the California tribes have been acquiring land through fee-to-trust transactions which have increased amounts of arable land. These water rights have not been adequately defined as to what happens in a drought or if the land is "off-reservation". The Indians, naturally, are pressing for their share at the expense of all others in a drought giving them an environmentally and economically unsustainable situation for all others and potential monopolies on any agricultural endeavor or drinking water endeavor. The Federal government has recently announced that the Tribes may raise marijuana in any state that legalizes recreational or med~~ical~~ marijuana. The water demand is thus set for this water-hungry crop. Then the water allocation becomes severely burdensome. Again "Smart Growth" requires the balanced manufacture of food – not marijuana.
The acquisition of agricultural land in California for their Tribal investor partners can easily result in food and marijuana monopolies by large Investors. Further, the tribes presently have theoretical senior rights to water to convert their land to agriculture or any other endeavor at any point in the future and to define or redefine these water rights at any point in the future. As these rights have not been quantified for California tribes and for the obtainment of additional land, Tribes can potentially demand increases for their "senior claims".
During the droughts the effects of these "senior" undefined claims poses a serious obstacle to all new development. To the best of my knowledge, none of the water districts' Master Water Plans address these issues.
At present Indian water rights are being adjudicated in the Agua Caliente case. The results of this judgment is expected to reverberate around the state as it will set the pattern. Will the State agree to grant Indian Tribe Investors monopolies? The case is also interesting in that the Tribe in question refuses to define how it will use the water and if the demands can be increased in the future. What is known is that they demand water for their reservations meet their undefined requirements of "water quality"

and that the Colorado River is the prime and only practical source. And that source has been rejected. The sensible decision is that the Indians would be given reasonable amounts of water for food production with the same quality of water that the Tribe would get from the natural resources that were at its disposal at the time of creation of the reservation. The Water District in this issue has suggested the Indians merely want to sell the purer water back to the same district.

The Tribe has argued that the replenishment of its groundwater with progressively saltier water will ruin their aquifers. That position has some sound basis, but the issue of quality above the natural levels it would have gotten aided by artificial transport is not addressed. There is also no agreement as to whether or not the purer water will be only for recharging ground water. Further, the only way to provide purer water is through expensive desalinization. Who pays for that process? Should the costs and profits from desalinization either be split with the citizens of California or will the Tribes and their Investors be given carte blanche access to citizen pocketbooks? Will the desalinization be free of carbon taxes? If not, who and what environment shall suffer? How will the concentrated waste brine be handled?

As San Diego has the largest number of these reservations, the major sources of water for this project will from either the Colorado River or desalinization projects (particularly as Tribal lands line the banks of the Colorado).

Before we can go forward these issues must be resolved immediately and fairly to all parties. It must not generate monopolies, increase carbon taxes unduly, produce more concentrated brine, or aggravate the water shortages.

**Water Quality and Groundwater**

The Governor is looking ahead in his preparation of consideration of water quality control. As water becomes scarcer and the rivers saltier, a logical approach is to lower the quality of water. Plants engineered to thrive in saltier conditions will aid immensely. Showers, toilet operation, landscaping and most eating utensil washing would be done with the poorer grade water. That would leave all drinkable and food prep water to be processed on site or through the sale of bottled water. Two considerations exist:

1. Bottled water has been a profitable operation for one Indian Tribes and a large multinational firm. Selling water for $2 a bottle can be very lucrative.
2. There will be no need for these quality reductions for decades if illicit marijuana growth is eliminated and poor environmental management policies are repaired. Any degradation of quality will be at the instigation and intransigence in the Government's desire to go after citizens rather than properly enforcing the law against criminals and repair environmental mistakes.

**Local Control**

The Sacramento proposed drought relief measures being expedited tie the hands of local agencies. The plans impose impractical long range actions and punishes the wrong people. Rather than empowering local governments to deal with their local issues with their intimate knowledge of their districts, they are being subjected to gross and arbitrary regulation. The State is employing a giant central command meat axe to a problem requiring an army of knowledgeable boots on the ground armed with scalpels. Unleash the creativity and responsiveness of citizens and local agencies.

All thoughts and opinions expressed here are my own.

Submitted with respect,

Michael Hunsaker
Chairman, Property Owner Defense League, Inc. (a 501c3)
Board member of the Twin Oaks Valley Property Owner Association.
CBOC taxpayer representative for San Marcos Unified School District
CBOC taxpayer representative for the Dehesa School District.