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Carmel River Steelhead Association

Advocating for Steelhead Since 1974

Fish Tales
Monthly Newsletter



OCTOBER 2020

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PRESIDENT'S MESSAGE

Steve Park

Habitat. Internet search definition: The word “habitat” has been in use since 1755 and derives from the Latin habitare, to inhabit. Habitat can be defined as the natural environment of an organism, the type of space in which it is natural for it to live and grow. This biotope then is the place where we humans share space with everything else.

Habitat allows for all of us to live and grow- whether human or steelhead. The question becomes, can we live in harmony? Can we live harmoniously and benefit equally while preserving the habitat that Mother Earth has graciously allowed us? The story behind Earth being called “Goldielocks” was that it took a habitat of just the right nature to produce life as we know it on this planet. There is a balance that should exist and if it does not, then the mere fabric of our habitat suffers as it loses its complexity. The idea that “everything is connected” speaks directly to the science of understanding habitat and how connected it is to so many things. If habitats are rearranged by the human hand as opposed to nature’s doing, is that a form of evolution? And if so, is it a form of evolution we should allow? Is there a reason to think about preserving life entities in these conversations? I hope so.



Photo: Agence France-Presse

A change in habitat came to yet another part of the Carmel River watershed just some weeks ago. That watershed, much like its predecessors, burned with a vengeance. The perfect storm for fire exists here and it only needed a spark. Enter the Carmel Fire. It spent its first day burning the upper slopes and ridge line on the South side of Tularcitos Ridge up above the North side of the Cachagua Creek. Over the following days the Carmel Fire burned and burned, destroying most of what it came in contact with. It seemed, however, to stay back and away from the Cachagua Creek, only dipping down to the creek in a few spots. The creek, as we knew it this rescue season, seems untouched and peaceful even without water. When the water comes this winter the creek habitat will probably change significantly. The denuded mountain side run off will be unabated and the delivery will be swift. Should there be any sizable rain events, then the habitat of the Cachagua Creek will be altered and more than likely that habitat will take years to recover.

Considering that the Cachagua creek is arguably the number one Carmel River tributary for spawning and early stage rearing, as the rescue numbers indicate, then this Carmel Fire event plays even heavier into the Steelhead survival equation.

When CRSA is in the Cachagua Creek habitat, we are witness to and are studious of the creek's health since the most recent winter and other nature or man-made events. The ideal steelhead spawning habitat would want more gravel and less sediment. So the news is not good when fire comes to town. The hills above the creek will bring potent mixtures of rain runoff as that runoff passes through a consortium of matter, both natural and man made. Not all of this runoff will reach the creek, at least not directly, but some will and it will bring tainted silt. The fire caused the habitat to change and will send the spawners looking for other reaches of the creek, but this fire has a partner (the River Fire burning in the Finch Creek watershed) and that partner is burning in connecting tributary territory. The challenges never stop, but habitats and their inhabitants recover. A couple of wet years with good flows will move the silt, clean the gravel, and allow for good production as the steelhead spawners return.

The 2016 Tasajara Fire burned in the Eastern most reach of the Cachagua Creek where it joins with Finch Creek and James Creek. All three of those creeks felt the burn and the scars years later are still visible. However, the winter of 2017-2018 was generous with its rains and the adults were able to populate throughout the tributary system. The result has been two years in a row of history setting rescue numbers. This year saw record setting 1+ year olds being rescued. Not only did the fish spawn well but they were able to hold over through the summer. This action then represents habitats in motion, continually changing, continually recovering and always evolving.

Time will tell, is pretty much the case here. All of these changes will have their effects as they have when fires were here before. The habitat will shift from where it is presently and ready itself for whatever the coming winter might bring. The habitat that burned will change the habitat that awaits. Will this habitat change effect the fish populations? Yes. How much change, how long will the change last before it blends into the habitat it has entered and will the habitat change welcome the spawners and their children? History says yes. We will see.

Photos By Steve Park.



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CONSERVATION REPORT

Brian LeNeve

Where We Are With Water for Fish

Those of us on the Peninsula most likely heard Cal Am withdrew its permit application to the State Coastal Commission for the Desal Plant. Those of you out of the area may not have heard about it until now but it did happen. What does all of this mean for the Peninsula, the Carmel River and our steelhead? In the short term it means nothing, but beginning in roughly 15 months on December 31, 2021, it could mean a lot.

In 1995 because of complaints, mainly by CRSA, Cal Am was ordered to find a new water source to replace over-pumping from the Carmel River. When a new water source was not developed in 15 years, in 2009 the State Water Resources Control Board (SWRCB) issued a Cease and Desist Order (CDO) to Cal Am giving them the specific date of December 31, 2016, to complete that new water source and to reduce pumping from the Carmel River to its legal limit of 3,376-acre feet. Cal Am applied for (with CRSA support) and received an extension of five years to reduce its illegal pumping bringing us to December 31, 2021. At that time (unless another extension is given) the SWRCB will have to require Cal Am to reduce pumping to their legal limit and to decide if the CDO should be removed. (The CDO not only gave a specific date to reduce pumping from the Carmel River it went a step further to protect steelhead and installed a building moratorium on new construction including any remodel that would increase water use. The reasoning behind the moratorium was so water use on the Peninsula did not increase in the time given to find a new water source. Increases in water use would dry the river more than it does now and harm steelhead even more.)

Monterey Peninsula Water Management District (MPWMD) has already written a letter to the SWRCB asking to start discussions for yet another extension. MPWMD knows that the Monterey Peninsula will not have enough new water sources to replace what is needed to reduce illegal pumping from the Carmel River and remove the CDO. CRSA is going to strongly oppose the request for an extension for many reasons. Primarily because every time there is a date given to reduce pumping from the Carmel River, people with their own agendas get in the way of new water sources and we go back to harming steelhead. After 25 years and countless broken promises, steelhead need water in the river more than people need long showers. CRSA supported the last extension because we believed the projected water shortfall of 5,000-acre feet was too much for the Peninsula to absorb and legally it might have been challenged for "health and safety" reasons. From our and other environmental groups support, CRSA was able to get an additional 2.5 million dollars in mitigation for steelhead, hoping to make the river a better place in five years. Now with some new water sources, the shortfall will be much less (depending on whose data you use) so the Peninsula will not take such a hit. We also are not sure we received the mitigation we agreed on and cannot get a

satisfactory accounting of money spent or what it was spent on.

All of this makes December 31, 2021, a critical date for steelhead. If the CDO is lifted, Cal Am will be required to reduce pumping from the Carmel River to 3,376-AF; steelhead will benefit by more water, but people will be greatly inconvenienced by less water. If the CDO is extended a whole new set of problems arise.

Going back to the original question, what does Cal Am withdrawing its permit for a desal plant mean for the Monterey Peninsula and the Carmel River (including our steelhead), we have to discuss what will happen if the SWRCB requires Cal Am to only pump its legal water from the Carmel River. With that as a basis, there are still many of ways to look at everything, therefore, I will only discuss three scenarios. 1) What will it take to reduce pumping from the Carmel River to legal limits? 2) What will it take for the SWRCB to remove the CDO from Cal Am? 3) What will it take to for the Peninsula to have enough water to meet current and future needs? *Item 3 will be discussed in the next newsletter.*

1: What will it take to reduce pumping from the Carmel River, without taking water from other areas? Unfortunately, there are many ways to look at this depending on the production numbers you use. The only given is, Cal Am has a permit for 3,376-acre feet (AF) of water. What is needed to be replaced, depends on what numbers you use as past production from the river? Based on the CDO, right now Cal Am is allowed to pump 8,310-AF. Based on a three years actual pumping we have an average production of 6,267-AF. Based on 5 years of actual pumping we have an average production of 6,564-AF. Using the above production numbers, we can use the following tables:

	CDO Allowance	3-Year Average	5-Year Average
Production	8,310-AF	6,267-AF	6,564-AF
Permit allowed	3,376-AF	3,376-AF	3,376-AF
Water Needed	4,934-AF	2,491-AF	2,788-AF

The water that will be used to replace the Carmel River water is Pure Water Monterey Phase I (PWM I), which is the recycled water project. MPWMD states that PWM I can produce 3,500-AF of water. If that is the case, with both the 3 and 5-year river production we would have enough to “get off the river.” The problem is PWM I is not producing 3,500-AF, rather only 2,760-AF. If using numbers for actual production of PWM I, then only under the 3-year average production can we “get off the river.” MPWMD insists that when they drill a new injection well, they will produce 3,500-AF, but I have been promised water for so many years from so many people, I will only believe it when I see it. **It does look like PWM I would allow Cal Am to reduce pumping from the Carmel River to its legal amount.** (I have given a scenario of pumping 8,310-AF of water. If the CDO were to be extended I would believe the SWRCB would reduce the allowable pumping from the Carmel River to

6,267-AF or less, so the 8,310-AF of water is nothing, I think, to worry about.)

If the only thing under consideration is replacing illegal pumping from the Carmel River, it could be done. If we as residents of the Monterey Peninsula want the CDO to be lifted there are other criteria. (Remember the above scenario is just to replace river water and only under the 3 and 5-year average production would PWM I provide water for anything else.) The criteria for removing the CDO is not just replacing river water, so this in itself would not remove the CDO.

2: What would it take for the SWRCB to remove the CDO? Condition 1.5 of the CDO states the CDO will remain in effect until Cal Am certifies they have a permanent supply of water to replace the illegal water from the Carmel River, and the Deputy Director for Water Rights concurs. Right now, I do not think Cal Am would certify that PWM I as a permanent water source because they have stated recycled water is *not* drought proof, although MPWMD would certify.

There are two tests the SRWCB will use to determine if the CDO is complied with. #1 Is there enough water to replace the river water (and it could be argued based on discussion above that there is enough water)? #2 Is the water supply is enough to meet customer demands? This is what I will discuss here but realize, if things were not simple in the first test to see if we have enough water to replace the river water, this second test is really not so simple. Here we must look at how much water is available and what demand there is. Neither is black or white.

How much water is available? We can get water from: 1. Carmel River, 2. Seaside basin, 3. Aquifer Storage and Recovery (ASR), 4. Sand City Desal Plant, 5. Pure Water Monterey Phase I, or 6. Carmel River table 13 water.

1. Carmel River - Cal Am has a legal permit to pump 3,376-AF of water and will do so indefinitely. There was some talk about pre-1913 water but the CPUC discounted that water as not available and I agree.

2. Seaside Basin - This source has been adjudicated by a judge, so is a legal and steady amount of 774-AF.

3. ASR - Determined on how many days the Carmel River runs over 120 cubic feet per second. MPWMD in their projections list 1,300-AF as ASR production. Since ASR phase II came on line in 2010, ASR has pumped from 2,345-AF in 2017 to no water in 2014 (the river did not run over 120 cfs). If you average the 10 years it comes out to 778-AF per year. If you remove the highest and lowest years from the equation there is an average pumping rate of 675-AF. So, for ASR you can use a MPWMD high number of 1,300-AF, a moderate actual number of 778-AF, or a low

actual number of 679-AF.

4. Sand City Desal - The Sand City owned desal plant that was to produce 120-AF per year, but has only has produced 94-AF per year; another example of what could be produced compared to what is produced. The Sand City Desal is exempt from the CDO building moratorium because it was built before the CDO was issued, therefore, Sand City can use their own desal water for new construction or remodels. While the Peninsula can use 94-AF of water now, we have to consider that Sand City will build out and that amount of water will be reduced over time. Right now, I see at least two construction sites in Sand City. How much the usage of Sand City Desal will be reduced is speculation, but we must figure it will go down. For this discussion I will use a high number of 94-AF, a moderate number of 90-AF and a low number of 86-AF.

5. Pure Water Monterey I - This project promised 3,500-AF but as of this date it is only producing 2,760-AF. This project has a problem with injection wells and is in the process of funding and drilling new wells which should come on line by the end of next year. At that time, they insist they will produce the full 3,500-AF. It is possible they can produce 3,500-AF but some do not feel that will be sustainable over the years. For this discussion, I will use a high number of 3,500-AF and a low number of 2,760-AF.

6. Carmel River Table 13 water right - Cal Am has a permit under Table 13 to pump 1,488-AF of water from the Carmel River is excess of its 3,376-AF permit. This water can only be pumped at the same time as ASR water. Considering we cannot pump all of the ASR water allowed, I fail to see where any water can be pumped for Table 13 permit. For this reason, I am not including any water from Table 13 in my analysis. Just realize at some point in time, someone may figure a way to get this water, but it will not happen in the near term. Were it to happen, we could add the MPWMD 300-AF per year figure for Table 13.

Once we get the number of AF of water that can be produced, and it gets into the Cal Am system from all sources, there is wastage mostly from leaks. Cal Am was ordered in the CDO to reduce their wastage to 10%, therefore I will use that number to reduce production to what is available for use.

With all of what is discussed above, we can again develop three tables showing best, moderate, and low available water.

	Best availability	Moderate availably	Low availability
Carmel River	3,376-AF	3,376-AF	3,376-AF
Seaside Basin	774-AF	774-AF	774-AF
ASR	1,300-AF	778-AF	679-AF

Sand City Desal	94-AF	90-AF	86-AF
PWM I	3,500-AF	3,130-AF	2,760-AF
Total production	9,044-AF	8,148-AF	7,675-AF
Less waste	-904-AF	-815-AF	-767-AF
Available water	8,140-AF	7,333-AF	6,908-AF

Now we must compare what is available to what the water demands of the Peninsula are. This is where things become speculative because everyone has an idea on what next year's water usage will be. If we go back and look at historic usage, we have many figures. According to the 2020 MPWMD Supply and Demand Letter the 10-year average usage is 10,863-AF. The 5-year average usage is 9,825-AF and the 3-year average usage is 9,817-AF.

Even using the lowest usage of 3-years we do not have enough water to meet even the best availability levels (lowest usage 9,817-AF, less best availability of 8,140-AF equals 1,677-AF short). Even if we do not consider wastage, there still is not enough water (lowest usage 9,817-AF less best production of 9,044-AF equals 773-AF short). If people do not conserve water, we have even a larger shortfall. The best case shows a shortfall of 1,677-AF. If people go back to the 10-year average usage of 10,863-AF we have a shortfall of 2,723-AF.

In summary, as of right now, using the best production or available amount of water compared to the lowest usage numbers, we do not have enough water to remove the CDO or stop illegal pumping from the river. The SWRCB cannot remove the CDO, but they could require Cal Am to stop illegal pumping. If that were to happen, by my figures the Monterey Peninsula would have to reduce usage by 1,677-AF, which would not be pretty (would require rationing), but could be done. What the SWRCB will actually do is anyone's guess. My guess is they will extend the CDO but reduce allowable pumping from the Carmel River to where it affects the Peninsula. Not that they want to hurt the Monterey Peninsula, but I feel they are really tired of the water problems. I feel that the only way the Peninsula residents will solve our water problem is if and when we feel the pressure, if not some hurt.

This is my take on the water situation right now, in the next issue I will go into what I perceive is the outlook for the future.

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Scientists: Water Shortages In West Likelier Than Previously Thought



Photo was retrieved from *SKY-HI News*.

KPIX- BCS SF Bay Area

September 15, 2020

(CBS / AP) — There's a chance water levels in the two largest man-made reservoirs in the United States could dip to critically low levels by 2025, jeopardizing the steady flow of Colorado River water that more than 40 million people rely on in the American West.

After a relatively dry summer, the U.S. Bureau of Reclamation released models on Tuesday suggesting looming shortages in Lake Powell and Lake Mead — the reservoirs where Colorado River water is stored — are more likely than previously projected.

Compared with an average year, only 55% of Colorado River water is flowing from the Rocky Mountains down to Lake Powell on the Utah-Arizona line. Due to the below-average runoff, government scientists say the reservoirs are 12% more likely to fall to critically low levels by 2025 than they projected in the spring.

“This is a pretty significant increase over what was projected in April due to the declining runoff this year,” hydrologist Carly Jerla said.

The forecast could complicate already-fraught negotiations between Arizona, California, Colorado, New Mexico, Nevada, Utah, Wyoming and Mexico over future shares of the river that supplies their cities and farms. Those talks will draw up new agreements by 2026 over use of the river that’s under siege from climate change and prolonged drought.

Some of urban and agricultural water users have been forced to conserve water to secure the river long term, but it remains overtapped. And as cities like Phoenix and Las Vegas keep growing, the region is only getting thirstier.

“We know that warmer temperatures have contributed to the drought of the last 21 years, and we know that they have exacerbated it,” Bureau of Reclamation Commissioner Brenda Burman said.

Unlike the [24-month projections](#) that the agency uses to allocate water to the seven states and Mexico, the models released Tuesday simulate various weather and usage patterns to help water users prepare for different scenarios.

Scientists use what’s called the Colorado River Simulation System to project future levels of the two reservoirs. They employed “stress testing” techniques based on river flows since 1988 to determine potential shortages if drought conditions persist.

Arizona, Nevada and Mexico agreed to cuts for the first time under a drought contingency plan signed last year. The water level in Lake Mead sits at 1,083 feet (330 meters). When projections drop below 1,075 feet (328 meters), Nevada and Arizona will face deeper cuts mandated by the plan.

Stress test models suggest a 32% chance that Lake Mead will fall below 1,075 feet by 2022 and a 77% chance by 2025. The model’s median estimates indicate Lake Mead will drop by 35 feet (11 meters) by 2026.

The water level in Lake Powell is at 3,598 feet (1,097 meters), and estimates suggest it could drop by 50 feet (15 meters) by 2026.

Burman said the models provide valuable information to cities and farms preparing for the future as drought persists and average temperatures trend upward. She said drought contingency plans are an effective mechanism to address the projected shortages — for now.

“I think what the projections are showing us is we have greater uncertainty than

we did last year,” she said.

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<https://sanfrancisco.cbslocal.com/2020/09/15/west-water-shortages-likelier-colorado-river-bureau-of-reclamation/>

CRSA Membership

CRSA Officers

President: Steve Park
831-601-8649
stevepark@razzolink.com

Vice President: Frank Emerson
O: 831-655-3626
M:831-277-0544
frank.t.emerson@gmail.com

Treasurer: Brian LeNeve
831-624-8497
brian@brianleneve.com

Secretary: James C. Jeffery III
831-659-0804
jim@jamescjeffery.co

Conservation Chair:
Brian LeNeve
831-624-8497
bjleneve@att.net

Newsletter Editor:
Hallie Heath

Web Master:
Julie Dalton

CRSA Board of Directors

Robert Stoddard
541-954-9477
rhstoddard@gmail.com

Tom Pelikan
831-601-8270
tbpelikan@comcast.net

Hallie Heath
707-502-6614
hcheath487@gmail.com

Luke Coletti
ljc@groknnet.net

Erik Scarr
erikscarr3@gmail.com

Jaime Eltit
jeltit7@gmail.com

Miranda A. Taylor
209-202-8720
mat755@humboldt.edu



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