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Stories of the Sacramento Valley

The landowners, conservationists and water managers creating a better landscape for birds, fish and people.



Stories of the Sacramento Valley

When water is discussed in California, we traditionally have found ourselves at odds discussing the various policies and issues that come with managing a precious resource that people value in different ways. But, behind the debates, discussions and agreements is a new way forward with people dedicating their lives to managing water for multiple benefits and collaborating with neighbors and diverse people across the state to make the region a singular place in California.



In the Sacramento Valley, we are blessed with leaders who live, work, and play in this special place, and they work hard to cultivate a shared vision in the region for a vibrant way of life. They care deeply about the landscape and rivers, knowing that the combination of water, land, and sun are the basic ingredients for life. This book is a collection of stories highlighting the human dimension, exploring the intersection of people with the natural and working landscape. These stories, which capture the essence of the region and are illustrative for many other people, reveal the social fabric of families and friends with interesting and diverse backgrounds coming together in pursuit of a new way to tackle our daunting challenges of managing water in California.

The people featured in this book are farmers, conservationists, and water resources managers. The Sacramento Valley has largely been shaped by engineers for the past 150 years; yet, as we now manage water for multiple benefits from ridgetop to river mouth, we rely upon a broader and deeper expertise. This includes the various “ists” – agronomists, biologists, climatologists, geologists, hydrologists, ornithologists, conservationists, anthropologists, and sociologists, as well as foresters, indigenous knowledge, and environmental scientists. In all cases, these leaders rise above their respective disciplines to care deeply about the sustainability and future of the Sacramento Valley for all forms of life: people, fish, birds, and an amazing biodiversity that calls this place home.



President, Northern California Water Association

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Personal Stories

Landowners





“These fish will suffer the same fate if we don’t adapt our practices to improve their habitat.”

Fritz Durst

In Firm Defense of Staring at the Ground

While the rest of the world was watching a flying DeLorean, humming along with a material girl and marveling at a man taking flight on a basketball court, Fritz Durst’s attention was transfixed on the ground. It was 1985 and Back to the Future was a box office smash, Madonna was leading a musical revolution and Michael “Air” Jordan was taking the NBA to new heights. Despite all the flashing fluorescence of this new material world, Durst had other things on his mind. He didn’t grow up idolizing pop culture figures. His heroes were out in the fields, muddied to the knees by sunrise.

“From a young age, I felt a strong tie to our family farm. It is a place that was special to me as far back as I can remember,” said Durst, currently leading Tule Farms into its sixth generation. At five years old, Fritz was an extension of his father Oscar’s shadow, eager to learn the ropes of a proud family business. Most days, you’d find young Fritz following his father up and down the steps of his tractor. At this young age, Fritz was unaware of an ongoing struggle his father endured, fighting to making their land productive. In one of the most fertile landscapes in the world, Oscar’s crops remained defiant.

“My father tried adding nitrogen and phosphorus fertilizers to the soil, even rotating crops from field to field, but there were still shortcomings that we couldn’t quite explain.”

After earning his degree from nearby UC Davis, Fritz returned to the farm in the mid-1980s with a new perspective on the stubborn crops. When the winter months passed, trenches as deep as grave sites stretched hundreds of yards in the fields. “six-foot deep is where our farm will be if we don’t do something to rejuvenate the soil,” Fritz recalls.

Bucking the trends of traditional farming, the Dursts decided to try something radical - and left the tiller parked. By any usual standard, soil is tilled before seeds are sown but Fritz knew - if they continued to farm by the usual standard, there wouldn’t be any soil left. “We began using a no-till technique. Which means we plant wheat and barley directly into the residue of last season’s crop.”

It was a revolutionary idea, but Fritz believed there had been too much focus on the crop and not enough attention to what lies beneath it. “If I give back to the soil, the soil will give back to me.” And that it did. As the rains no longer washed away the loose soil, never again would Fritz’s farm resemble a mass grave site.

Since that day, Fritz watched his soil produce increasingly high-quality crops and hold more moisture throughout the year, which led to far less watering and in the case of dry farmed fields, higher yields. The unforeseen gift inspired this Yolo County farmer to rethink the scope of his operation entirely and to give back in ways that benefit the bigger picture.

Today, Tule Farms in Dunnigan Hills is more than rows of wheat, wine grapes and sunflowers - it is a beacon of environmental stewardship and home to several endangered species, as well as numerous other forms of wildlife; garter snakes, longhorn Elderberry beetles, Swainson’s Hawk, bald eagles and even Kangaroo rats, to name just a few.

As the Durst family name becomes more synonymous with conservation and stewardship, Fritz doesn’t rest his laurels on name recognition. He has joined a team of other farmers in the Sacramento Valley who use their own farm fields and water to help benefit California’s native species. From birds overhead to fish underwater, Durst is lending a hand to maintain bird refuges, increase critical reptile habitat and feed more fish.

Times have surely changed since the 1980s - Back to the Future has been replaced with Wonder Woman, Madonna with Lady Gaga and Michael Jordan with LeBron James. Fritz’s fields have gone from rough to lush to natural habitat, and he now sets his sight on helping young endangered salmon. “The world has been changing for a long time” Fritz says, “the most important thing we can do is manage that change. If we stop adapting, we’ll end up like the dinosaurs - extinct. And these fish will suffer the same fate if we don’t adapt our practices to improve their habitat.”

Today, living amongst a cornucopia of crops and native wildlife, Fritz continues to keep an open mind for any lessons the earth might have to offer. Ready to uncover any other parts of the valley that might need his attention, he offers a simple reminder - “it all started by peering a bit deeper into the ground.”



“ We can either try to ignore it, or adapt to our new normal and create a system that is functional not only for farming but for wildlife. ”

Kim Gallagher

The Art of Adaptation

Most can make adjustments when conditions are optimal, but when faced with real adversity, that is when one's character is revealed. The Erdman story begins in 1920. Kim's grandfather, Fritz Erdman, suffered a traumatic loss when his mother was struck and killed by a train in the family's home state of Oklahoma. Fritz and his father were in need of a fresh start, so the family packed up and moved out west to live near his uncle who farmed land in Glenn County, in Northern California.

Growing up on a farm with his father and uncle, Fritz believed he was prepared for anything. And, having experienced such hardship and heartache at a young age, he also believed he could overcome any obstacle. If not for this belief, he probably would have taken up another craft after his first major setback.

Heavy rains lead to dramatic flooding, wiping out all of his 1936 crop in the first year he was out on his own. A bank loan would get him through the next couple of years, but conditions seem to only be getting worse on his plot of land. Some forty miles

away, a parcel nestled along a levee near the town of Grimes was on the market.

“He knew he needed to adapt,” says Kim Gallagher, Fritz Erdman’s granddaughter and now a 5th generation farmer. “He was always interested in engineering and wanted to experiment with new growing techniques.”

Innovation didn’t stop in the fields. Rice drying on a large scale was still troublesome throughout the industry, without proper drying, the rice stays wet and will begin to mold or breakdown. Fritz built a new kind of flat house drier. He put screens at bottom of the football field-sized warehouse and then fans underneath. This allowed the Erdmans to keep the rice at constant moisture.

Fritz passed away in the 1970s, but his son, Jim, took over operations and kept the innovative spirit alive by implementing new environmentally friendly practices in the fields such as not spraying grasses and weeds in surrounding ditches and lands. This led to creation of habitat for insects and reptiles that boosted pollination of wild flowers and crops and aided in overall pest control.

When Jim fell ill, Kim and her husband, Pat Gallagher, began spending more time on the Erdman family farm – eventually taking over complete control in 2014. While her grandfather dealt with flooding, Kim is saddled with navigating through historic periods of drought.

“We can either try to ignore it, or adapt to our new normal and create a system that is functional not only for farming but for wildlife as well.”

On the family’s rice fields, Kim is turning to winter flooding to breakdown the remaining rice straw after harvest and provide valuable habitat to migrating shore birds and water fowl along the Pacific Flyway. Those same fields are also being used to grow food for fish like the endangered chinook salmon who are

cut off from their primary food source. The water on the fields is drained back into the Sacramento River full of nutrients the fish need for survival.

Many people may fold up or take the easy route when times take a turn for the worse, but the Erdmans have continually shown an appetite to do the opposite. This pioneering mindset may have been born out of tragedy, but is it a spirit that that each generation has adopted in their own way. Who knows what the future holds for this farming family, but we can be fairly certain they’ll adapt as they always have.





Gorrill Family

When Life Gives You Clay, Build a Legacy

Ralph Gorrill was one of those astute types, he could see a problem and know the answer would be found at the tip of his drafting pencil. A builder seemingly at birth, it was only fitting that he would be nose deep into those back-breaking, 50-pound text books at the University of California, Berkeley. It was underneath the famed Campanile Clock Tower that Ralph found himself confident he would soon be an engineer just like his brothers.

With a degree in hand, Gorrill landed 150 miles north of the East Bay hoping to follow his brothers

in finding work in the rural Sacramento Valley. Before the modern-day Highway 99 would be the main thoroughfare, in 1917, only a variety of country roads connected the rural towns of Northern California. Ralph landed a job creating a better route for ranchers and farmers delivering cattle and wheat. With his drafting pencil in hand, Ralph drew up a solution for the main road, known as the Midway, that would cut hours off of delivery times.

“Little did he know that this two-lane strip of roadway would wind up setting him on an entirely new path,”

said Corrie Davis, a fourth-generation family member who serves as the managing partner and chairman at Gorrill Ranch.

The Leland Stanford Trustees were looking to sell their 17,000-acre Durham Ranch (of which Ralph bought a portion) along that very same strip of concrete Gorrill had helped create. The engineer had the inside track on the gossip as his brother-in-law was also the ranch manager on LST farm.

“What has always fascinated the family, is that our great-grandfather wasn’t a farmer, yet he was confident that he could make use of this farm that hugged Butte Creek. He saw real potential there,” said Davis.

A thick adobe clay spanned the property, which meant this land was prime for something other than cattle. The unique soil combination was a perfect recipe for rice. Gorrill Ranch is now known internationally for their quality premium rice.

In a state that is no stranger to prolonged droughts, Gorrill wanted to make sure he used whatever water he had, as efficiently as he could. “He truly became fixated on constructing the best irrigation system in the Sacramento Valley.”

Using gravity and leveling the clay at precise angles, Ralph crafted a sprawling web of water that reached every bend, edge, and corner of his fields.

“He never knew the meaning of doing something halfway. He built his labyrinth of pipes so well that our family still uses that same irrigation system to this day.”

Whether he knew it or not that simple act would help set the Gorrill family on a tradition of conservation. When he passed away in 1964, Ralph’s daughters Sally, Jane and Anne took over the farm.

Throughout their reign on the family ranch, the sisters turned their attention up to the sky and down below

the river surface. First, helping to create a comfortable place to rest for birds along the Pacific Flyway with their rice fields. There are now 40 acres of land set aside as an environmental preserve. And second, to help their underwater friends in Butte Creek.

Their timing couldn’t have been better. By the late 1990s, Chinook salmon were disappearing at an alarming rate. “We owe much of our success to Butte Creek,” added Davis. “And our family knew it was time to prevent the creek’s main inhabitants from disappearing.”

Joining other neighbors, many whom operate along the same Midway trail that Ralph once helped design, the Gorrills and this coalition of farmers, environmental groups, and other agencies dove head first into a massive restoration project known as the Butte Creek Fish Restoration Project.

The group retrofitted dams and screens to protect fish from entering irrigation systems. Then, the group built fish ladders to help the fish swim upstream throughout the summer and winter months. Today, up to 10,000 fish make their way through each spring spawning season.

Statewide, California’s salmon are still in trouble as population numbers remain dangerously low. But the Gorrill family believes it is a problem that will be solved. It is hard to deny their optimism, with a family tradition of problem solving and helping native species now a century old, they’re simply staying the course. As they’ve proven time and again, they certainly aren’t afraid to draw up a solution to a problem when called upon.



“It is astounding what you can accomplish when you spend more time on the positive aspects and truly collaborate.”

Brent Hastey

Son of a Rancher's Daughter

A trail of dust swirled behind the '57 Chevy pickup as it barreled down the path in an attempt to keep the herd in the pasture. Not one's typical choice to prevent the cattle from veering off course, but when you're nine months pregnant, it is a bit easier to maneuver when you have a 160 horsepower, V8 engine on your side.

As a cattle rancher's daughter, June did whatever was needed at the time to get the job done. A trait

that she would pass on to the child that would be born later that day.

Brent Hastey grew up on that very same ranch in Yuba County, but he wouldn't follow in the tire tracks of his mother. Cattle ranching would remain dear to his heart, but he was set to create his own path.

It was 1986 and California was dealing with what the press called a "tropical cocktail." But this was

no vacation. After a week, two plus feet of rain was measured in the Sacramento Valley. So much liquid fell from the sky that bridges were ripped away from their foundations and holes were left in levees. In Yuba County, 20,000 people from their homes in a matter of seconds.

When the sun finally appeared again, people demanded action. The entire Reclamation 784 Board Directors quit or were replaced, and Brent was asked to step in at the age of 26.

Hastey would learn that his own “tropical cocktail” would come a decade later. The New Year’s Day flood of 1997 saw the South Yuba River rise 26 feet above normal. Neighbors watched in horror as trailer homes, sheds, trees and anything else near the banks floated down the river.

As Brent canoed his family through their house to safety, he knew this was going to tear the community apart or bring it together. It did the latter. Once an adversary, the South Yuba River Citizens League and Hastey found common ground in the raging flood waters.

A partnership was born in one of the darkest times for Yuba County, giving a ray of light to the future of water and habitat management – something that was hotly debated for decades in the county. The Yuba Water Agency and the South Yuba River Citizens League started working together on critical habitat for native species. The blend of flood control and conservation has become a model for others in the state to emulate.

“It is astounding what you can accomplish when you spend more time on the positive aspects and truly collaborate.”

Hastey is now taking this approach on a statewide level in his role as President of the Association of California Water Agencies. He hopes similar results

can materialize that will encourage new collaboration and develop stronger coalitions to solve the state’s water problems.

As for June, she is now in her late 80s and is still out there in the field. Albeit this time, she’s not driving a truck but riding a lawn mower.





Charlie Hoppin

The Farmer Who Defied His Father

As thick white smoke filled the air, Charlie took a moment to soak in the moment. This former small-town farm boy was with one of the biggest action movie stars in history, who also happened to now be the governor of California. If only his father could see him now.

For most of his life, Charlie's father drove an oil truck around the Sacramento Valley making deliveries to farmers and ranchers. It is a job that the elder Hoppin would serve loyally to until the day he would retire.

Charles R. Hoppin Jr., better known as Ross - lived life frugally. Taking chances was not in his nature, which is why it was a bit surprising to see him purchase land for farming. With money from the G.I. bill in hand, Ross would purchase 280 acres in the Sutter Basin. He never wanted to be a farmer but he saw it as additional income to help his family.

"My father saw many valley families who had trouble paying their monthly oil bills," said Charlie Hoppin of Hoppin Family Farms. "That really shaped his view of life in agriculture."

Dad offered to pay tuition and gas money if Charlie would attend California State University – Chico after high school. Charlie obliged, but there was always something that pulled him to farming and ranching.

“At Chico State I started working as a sheep herder. I was asked to bring my flock in to help cut down weeds on the rice checks for farmers in Sutter County and rented winter pasture in the Chico area.”

Charlie would leave Chico without graduating. Not able to understand why his son had gone against the advice he had bestowed upon him; Ross nearly disowned his son. By 1983 – Charlie was \$380,000 in the hole.

“The hardest part for me is that my father died in 1992 having heard stories of how I owed money, and he never saw the turn around that I always knew would come.”

With control of the family farm, Charlie “planted a seed” that would eventually change it all. Charlie was one of the first to grow seedless watermelons – making the family one of the most successful growers in the Sacramento Valley. Charlie was not only out of debt, but was now thriving.

As the farm flourished, Charlie looked to make a difference elsewhere. In 2001 he played a vital role in getting a bill passed that would provide tax relief to farmers. Building a strong coalition of water users, Charlie curated a unique understanding of the complexities each group faced. It ultimately set him up for that meeting with the governor.

It's 2006 and we're back at the Hyatt hotel with cigar smoke swirling. The question he knew was coming was bestowed upon him. Governor Arnold Schwarzenegger wanted Charlie to serve on the State Water Resources Board – a position no other farmer had held in the history of the appointed body.

“There was so much frustration in the valley by farmers who felt they did not have a voice. I was elated to serve in this role to help bring a balanced approach to water management in our state.”

Part of the task was to reevaluate how water is allocated for farms, cities, and wildlife. One of the issues of water management continues to be the effects it has on endangered species. “I felt that endangered or threatened Delta fish should be managed as a total species package rather than just considering an individual species. We needed to rethink how our efforts for one species might impact another to ensure the best results for all.”

Charlie would become the chair of the board in 2009 and held that position until his voluntary retirement in 2013.

With all that he has accomplished, the one man who so desperately wanted success for his son will never see what Charlie has become. Ross Hoppin wasn't there to witness Charlie turn his farming business around. He didn't get to see his son return to school for those final few credits to graduate, and he even missed the time Chico State recognized Charlie as a Distinguished Alumni. Charlie has surely surpassed any expectations a father could have dreamed up for his son. To be able to see the lasting impact Charlie Hoppin is leaving is something Ross never would have imagined, but it is surely something he would be extremely proud of.



Tim Johnson

Changing Perspective

This story unfolds with Tim Johnson's entry into the rice industry in 1996. It is then that he assumed the role of Marketing Projects Coordinator for the California Rice Promotion Board.

"It all began by educating buyers about the high-quality rice that was grown here in the Sacramento Valley," said Johnson.

Tasked with promoting rice both domestically and internationally, Tim quickly found himself immersed in the intricacies of the industry. Little did he know that this role would mark the beginning of a lifetime career in California rice production and agriculture.

A pivotal moment in Tim's career came with the formation of the California Rice Commission a few years later, as he was appointed its first executive.

This transition, as Tim fondly recalls, marked a significant milestone in his professional trajectory—a journey that began with humble beginnings, including his days working on a Frito-Lay truck right out of college.

The timing of the Commission’s formation couldn’t have been more opportune.

“We went from educating consumers to understanding that we had to make sure lawmakers and government agencies understood how valuable rice as a crop was to California.

As agriculture faced unprecedented challenges in the early 2000s, the Commission emerged as a beacon of hope, equipped with expanded capabilities to navigate regulatory and public policy landscapes. Leveraging the industry’s stellar environmental track record and a robust public outreach program, Tim and his team at the Commission spearheaded initiatives that have made a tangible difference.

Today, there are 500,000 acres of rice fields from Sacramento to Chico.

“We grow mostly a Japonica rice, a medium-grain rice which is one of the most popular types used in Asian-based dishes like sushi and mochi. It is typically rounder, and stickier than other grains.”

Among the Commission’s most significant achievements is the expansion of its environmental portfolio. Initially focused on supporting the Pacific Flyway, the Commission’s efforts have evolved to include salmon conservation — a cause close to Tim’s heart. Through innovative water quality programs tailored for rice growers, the Commission has not only reduced regulatory burdens but also significantly slashed operational costs for growers.

Perhaps the crowning achievement of Tim’s tenure at the Commission is the transformation of the industry’s public perception. Through sustained and creative

outreach efforts, the Commission has successfully shifted the narrative surrounding rice cultivation.

“For years, farmers would burn the left-over rice straw from harvest to prep for the next planting season which negatively impacted air quality. In addition, flood control efforts disconnected salmon from their primary food sources by cutting off the land from the river. Today, we have made adjustments to flood the fields in the winter which now provides critical habitat for waterfowl, shorebirds and fish in California.”

No longer viewed as a mere commodity, rice is now recognized as a vital component of environmental preservation and a cornerstone of rural economies.

From the rice fields of California to nearly every piece of sushi across the nation, Tim Johnson’s impact on the industry is palpable. As we celebrate his journey, we’re reminded of the power of passion, perseverance, and purpose in shaping the world around us.



Maya Kepner

Like Father Like Daughter

The eyes of the beast hovered slightly over the water. The seemingly unworldly reptile peered across its horizon at the little girl who sat frozen in the canoe. Only a thin sliver of aluminum separated the two. With the hot Texas sun leaving beads of sweat across her brow, Maya believed “this was it.”

Before the stare down could go on much longer, a chuckle came from the other end of the boat. Steve couldn't help but laugh at the girl's imagined doom. The alligator dropped back below the surface and from that day on, it was hard to convince Maya to

stay home. She was happily dragged to every survey or surveillance trip Steve would take her on.

At the time Steve worked as the manager of the Laguna Atascosa National Wildlife Refuge in South Texas. Opportunities for Maya to join were aplenty but soon enough, she wasn't just tagging along. When family moved to Northern California in the early 2000s, the father and daughter would gear up often for mornings in the wetlands.

“One of the things we loved to do together was duck hunt,” said Maya Kepner. “But it was never just about hunting, it was about spending time in the blinds, seeing the sun come up over the water, hearing the geese flap their wings across the wet fields. We’d become paralyzed watching these beautiful animals take flight overhead.”

Overhead is where Maya would soon find herself as she was routinely flying with CDFW in a helicopter tracking Tule Elk throughout California. But the thrill of the new job was about to take a nose dive. Steep budget cuts meant state agencies would begin furloughing employees every Friday. With a bit less income, she used the off days to team up with dad.

Steve had gone out on his own after retiring from Fish and Wildlife. He found joy working with Northern California landowners to create better habitat for wildlife. “My father was a great listener and he had a real knack for finding partnerships that benefitted both sides.”

Maya felt the pull and decided to team up with her father full time. One of their first major projects is still in operation today. Conaway Ranch, located between Woodland and the Sacramento River, spans 17,000 acres and has become a model for how farm lands can also serve as habitat for hawks, snakes and migrating birds. Maya and her father were able to help ensure 6,000 acres of the ranch became viable habitat for wildlife while still serving as productive farm land.

“When government agencies and private landowners can demonstrate how they can work together to help native species and preserve historic agricultural practices, a beautiful collaboration is born,” said Kepner, Managing Member of American West Conservation.

Maya, the once frightened girl in the canoe, is now the one who feels the joy of her child falling in love with the great outdoors. Just like she did with dad, Maya

finds time to drag Dillion out into the fields whenever possible. Something that is never protested by the dusty blonde-haired, 5-year-old who wants nothing more than an afternoon in the mud.

And like grandpa and his mother before him, it seems almost impossible that Dillion won’t follow in their footsteps, and that - will be to the great benefit of wildlife in California.



The Landowners



“ With nearly 60,000 acres of fields along Butte Creek, they all felt a responsibility to help the salmon.”

Lundberg Family

A Vision Beyond the Dust Cloud

Innovators are lauded for their vision and ability to see the future - but in 1930's Nebraska, vision was a tricky subject. Some days, Albert Lundberg could hardly make out an object three feet in front of his face. Albert didn't need glasses - there was nothing wrong with his eyesight. A storm of earth and dust raged across prairies, farms and ranches, turning once fertile plots into barren wastelands obscuring Albert's vision.

By 1937, Albert and his wife, Frances, packed up what they owned and hit the road. Out west, the skies were clear, so the Lundbergs didn't see many alternatives

but to make their way to the Golden State. After arriving, Albert was labeled an "Oakie," but he was from Nebraska and wasn't too fond of that particular slur. "He hadn't planned to come west, but it is here that he would finally find what he was looking for," said Albert's grandson, Bryce Lundberg, Vice President of Lundberg Family Farms.

Over tilling of the land led to one of the worst farming disasters in American history. Stretching from Texas to Nebraska, the Dust Bowl rendered 35 million acres useless and left Albert with a new sense of responsibility.

Once settled in the small town of Richvale (located 18 miles south of Chico), Lundberg vowed never to repeat the mistakes of the Roaring 20s. Spanning four decades after World War II, it was common for farmers to dispose of their remaining rice straw after harvest by setting it ablaze. Plumes of smoke would blanket the sky throughout the Sacramento Valley.

Nightmarish flashbacks of the Dust Bowl's destruction led Albert to commit to a clearer path. Albert first tilled in the rice straw before planting winter crops. With oats and legumes in the winter, Lundberg could decompose the rice straw while rejuvenating the fields for next year's planting season.

Unfortunately, this process was not feasible for all of his fields. Thinking back to one thing families across the prairies had wished for, Albert knew water would be the answer. Joining with neighboring farmers who stopped burning, the Lundbergs discovered that a little water could go a long way. "By creating a vast shallow pond across the rice fields, grandpa discovered he could do more than just whittle down the rice straw," said Bryce. Repeated on fields throughout the valley, rice farmers were able to clear up the skies and subsequently allow migrating birds to rediscover a floodplain that had disappeared a century ago.

"By flooding the fields, farmers across the valley floor were able to recreate a historic wetland habitat. It is astonishing today to see the way the Pacific Flyway has returned in just a few short years," added Bryce.

With food and prime habitat now plentiful for birds, the skies turned dark once again, but with millions of ducks, geese and shorebirds flying in and out of the Lundberg's and neighboring farmers' fields. It was truly a sight for Albert to see. The Lundbergs say it is in those years that they discovered the importance of "farming in partnership with nature."

Bird populations soared while the family's rice products, Lundberg Family Farms, began appearing in grocery stores throughout the county. But not all

were sharing in the moment. Just a few steps from the Lundberg's fields, a native fish population dear to the family was facing a steep population decline. "When grandpa first arrived, he found California's Chinook salmon in great abundance, but by the early 2000s, that was no longer the case."

With spawning numbers of the salmon falling, the Lundberg family and their neighbors from the Western Canal Water District were ready to take action. "With nearly 60,000 acres of fields along Butte Creek, they all felt a responsibility to help the salmon."

A coalition of farmers, the Metro Water District and the US Department of Interior worked together to create a siphon that would help a few hundred fish reach key spawning sites. As ambitious as the project was, they not only hit the mark - they exceeded it.

Today, some 10,000 Chinook Salmon make the journey through Butte Creek each year. It is one of the greatest success stories in California to date. While it remains a murky future for the salmon, the Lundbergs imagine a brighter future for the fish.

Through collaboration and mimicking successes of the past, they believe it can be done.

While it may seem they are viewing this optimism through rose-colored glasses, this also happens to be the same family that saw through a bit of dust to create not only one of the most popular rice companies in the country but helped bring back the Pacific flyway. Sometimes, all it takes is a little vision.



“These lands do more than just produce rice.”

Al & Nicole Montna

Defying the Odds to the Benefit of People and Wildlife

He wasn't supposed to be able to grow anything on this plot of land, but somehow, that is exactly what Al Montna did.

It was 1967, and following in his father's footsteps, Al came back home to Northern California after college to give farming a shot. His family owned some land south of Yuba City in Dingville, but it had been leased out to a tenant farmer named Cobb Saunders after Al's father, Dutch, unexpectedly passed 10 years earlier.

Al was feeling confident and asked Cobb for a good field so he could try his hand at rice farming.

“Cobb honored my father's request by giving him the toughest field possible to turn a decent yield,” said Nicole Montna Van Vleck, President and CEO of Montna Farms.

Cobb just assumed Al would fail his near impossible challenge.

But he didn't and instead, by that fall Al had long, luscious rice stalks sprouting from this unforgiving plot of earth. Cobb was left impressed.

In the decades that followed -- Montna Family Farms would become a world-renowned producer of short-grain rice. But in those first few years, it was Al's medium-grain rice, known as Calrose, that was the star of the family's farm.

"These lands can do more than just produce rice," Al reckoned to family and friends.

As an avid waterfowl hunter, Al was dejected by the dismal number of birds he saw around his fields in the 1960s and 1970s. He knew that the flames kept the birds away and destroyed much of their food source.

At the time, the cheapest and fastest way to decompose of remaining rice straw stubble after harvest was to simply burn it. But the smoke did not bode well for the valley and its inhabitants.

It was the early 1980s and Montna began seeking partners to help in the crusade to create better habitat for birds. A few neighboring farmers signed on as did the bird-loving Ducks Unlimited and they discovered the benefits to flooding the rice fields instead of burning them.

Through this effort, the family had helped to create the first ever wildlife-friendly farmland in California. By the 2000s, Al no longer saw a handful of birds. He saw millions return to the valley each year.

A big reason for that is the food. Two-thirds of what these birds will need during the colder months can be found on farms like the Montna's.

Today, Al's daughters Nicole and Michele now lead the family to think even bigger when it comes to conservation. California's chinook salmon are struggling to survive as their population numbers are dwindling at an alarming rate.

In a place where you weren't supposed to grow much, Al found a way to grow rice and provide a home for birds. Now, those same fields, under his daughters' care, are helping fish on their journey to the Pacific Ocean.

"This display is quite dazzling. With a single scoop of water in a rice field, you will find thousands of tiny bugs darting to and fro."

Just with the water for the birds, this food for the fish could mean the difference between saving the salmon or not.

And as you've heard before. It isn't really supposed to work. But somehow, it just might.



“ There were those who said we’d have to choose farmers over conservation or vice versa. ”

Mary Wells

No is Not Good Enough

Girls were not allowed.

Agricultural-Science was a class for boys who would one day become farmers or ranchers. School-age girls were to take home economics so they could learn to cook and clean.

But, Mary didn’t accept a ‘no’ as easily as others. Especially after her father fell ill when before she entered kindergarten. A man just 30 years old, Mary’s father, Daryl, was stricken with a debilitating

autoimmune disorder, Rheumatoid Arthritis, that attacked his joints, leaving his hands and legs nearly useless.

The family had a 300 head cow-calf operation in the heart of California’s Central Valley, but with no one to lead the way, the operation was sold to pay the bills. But that did not mean the work was over, the ranches needed to be irrigated and maintained while the tenants’ cattle grazed and were rotated from field to field.

Mary got to work.

Life didn't get easier. In the 1950s and 60s, Future Farmers of America did not allow girls into their program, but that does not mean she wasn't expected to carry a project and complete records like everyone else. Despite pushing her way into the Ag-Science course and being a Merced County's 4-H All Star, she was told to stand outside when the FFA portion began. You'd think that would have diverted Mary into a different career. It didn't.

After earning her degree in agricultural from California Polytechnic State University in San Luis Obispo, Mary landed work with water districts in the Williams area – where her grandfather had left her land. One of her big challenges was to balance the Bureau of Reclamation's Management and Conservation Plan with the needs and practices of the farms in the district.

"There were those who said we'd have to choose farmers over conservation or vice versa."

Like many of the other choices Mary was presented with in her life, she didn't take that offer. Mary advocated that the Maxwell Irrigation District participate in an innovative fish food program during the summer that directs water through a wetland and tidal slough corridor of the Sacramento River system and into the Delta.

Why? To help feed endangered fish downstream.

Results were instantly positive. The program showed that the nutrient-rich "pulse flow" successfully generated a phytoplankton boom and enhanced zooplankton growth which greatly aided the Delta smelt and their egg production.

It is one example of many where Mary took the more difficult path in hopes of finding a positive and impactful result for the greater good.

Because of her tenacity, Mary is one of the most respected water managers and policy leaders in Northern California. "I look back now, and I think how my father's illness and death prepared me for the rest of my life. It helped shape the attitude I had with each challenge I faced and continue to face."

These days, the "nos" are a little less frequent, because as most understand by now, Mary is likely going to find a way to do it anyway.





Personal Stories

Conservationists





“ We have to find ways to ensure habitat and population gains we’ve made since the 1980s don’t slip in the coming years. ”

Virginia Getz

The Radiant Biologist

Virginia was feeling a bit down.

She was hoping to land an internship during the summer break. Prospects were bleak. Virginia’s attitude even more so. Ever since she was eight years old, Ed could see it in her eyes. His little girl was destined to become a biologist.

But during a pivotal moment in Virginia’s life, Ed watched as the glow faded from his daughter’s eyes.

Back home in Pacific Grove for the summer, Ed could not stomach the sight of his youngest daughter

moping around any longer. He packed up the car and the pair hit Highway 101 back to the University of California, Davis.

Virginia wasn’t sure how much good the trip would do. Many of her classmates were already eyeing different careers. This was at a time when there were fewer nonprofit organizations and public agencies wanted people with significant wildlife management.

Professor Dennis Raveling could see Virginia’s passion. He was not about to let her fall off track. The

respected waterfowl advocate and scientist pushed Virginia to follow her dream. The summer chat gave her the confidence she needed. And Ed would once again see the glow was back.

The shine would become nearly blinding as Virginia landed her first job. Hired as a U.S. Forest Service deer monitor, she was out in different parts of the Sierra Nevada nearly every week.

But little did she know that a duck hunting trip would take her to new heights. She didn't get any ducks that day but being out in the field with the waterfowl spoke to her in a way that no other species had before.

"The first time I heard the noise of a big flock of snow geese it made my heart race."

Virginia would get to follow the flight path of these birds to her next adventure. By the early 2000s, the waterfowl conservation organization Ducks Unlimited came calling. And today, Getz is the conservation programs manager, which means she oversees habitat conservation in California, Nevada, Hawaii, and Arizona.

Her challenge is no longer finding work but finding ways to make the program she oversees work as efficiently as possible. "Good science isn't enough; demand and costs of water may be putting birds at risk," said Getz. "We have to find ways to ensure habitat and population gains we've made since the 1980s don't slip in the coming years."

Bird populations and duck habitats rely on water spread out on wetlands and ricelands throughout the Sacramento Valley during the winter months.

"We are heavily reliant on agricultural lands for waterfowl habitat, which means it is more critical than ever that we work in partnership with farmers to ensure a balance for crops and wildlife," said Getz.

Ducks Unlimited works with landowners, farmers, water districts and state and federal agencies to create habitat for ducks and other migrating birds. To date, the organization has worked on 1,300 conservation projects spanning 719,000 acres of habitat in California alone. Getz is at the center of many of them. And it all goes back to a father who believed in his daughter and a professor who provided a bit of optimism to an aspiring biologist.



“Projects that deliver multiple benefits can become the model throughout the entire Central Valley.”



Ann Hayden

Creating Habitat Through Collaboration

The lure of a ten-speed bike was all it took. This was no ordinary bicycle, however. This was a radiant red Schwinn with swooping sight lines, 10 gears of unfettered pedal power that would serve as a freedom chaser to propel 9-year-old Ann Hayden to explore country roads in her rural Yolo County neighborhood. And Ann was ready to go.

Her parents, on the other hand, weren't about to bend so easily to a simple plea from their daughter. A deal was struck instead. Her parents would buy the bike if Ann completed a year of 4-H, the agricultural youth

development program, which her brothers had been participating in for years. She chose to raise what she figured would be the easiest animal: a sheep.

Despite Ann's unwavering dedication, as the 4-H showcase began, and the other kids had calmed their sheep as they waited their turn in the show rink, her skittish lamb broke loose which turned quickly into spontaneous entertainment for the crowd. Finally, after what seemed like an eternity to Ann, the dust finally settled and the lamb was captured. Despite all the ruckus, a red-faced Ann stepped up and proudly

showed her lamb, which was sold to the highest bidder of the day. With that, she was able to secure the 10-speed she so deeply desired.

Ann could not have known then, but this fortuitous moment would aid her when approaching unwieldy challenges as senior director of western water at Environmental Defense Fund (EDF) decades later.

“It taught me the importance of being flexible and maintaining my cool when the least-expected situation arises,” Ann said. “And it’s always a valuable lesson to keep a sense of humor and humility in seemingly unfixable circumstances.”

Ann has worked with Sacramento Valley farmers to create suitable habitat on working fields while also helping landowners improve their ability to recover from conditions related to climate change, such as when flood waters are moved across the landscape.

“Creating this habitat has real ecological value, which farmers can be paid for producing by both public and private funding sources.”

Ann and her team developed ways to quantify the habitat benefits for a suite of at-risk species including Swainson’s hawk, Giant garter snake, Monarch butterfly and juvenile Chinook salmon. She’s worked directly with innovative growers at Davis Ranches and River Garden Farms to identify the optimum places to create habitat and a system to measure habitat benefits over time. In particular, Ann is encouraged about efforts currently underway to quantify habitat improvements for endangered salmon as a way of building more integrated and resilient ecosystems and water systems.

But these projects can’t be successful without a foundation of trust between environmental interests and farmers.

“My hope is that innovative, on the ground projects that deliver multiple benefits can become the model

throughout the entire Central Valley in California. As more stakeholders come together to draft a unified vision of the valley, including integrated land and water management, the better chance we have at striking a balance where people and wildlife thrive.”





“ Water, food and land are the three main ingredients that boost wildlife populations and farm fields can ensure our native species thrive.”

Meghan Hertel

Birds, Farms and a Carolina Girl

There wasn't an older brother or sister. Single mother worked full time, and in an age when this was normal, the outdoors became her babysitter. Few of her friends lived in the same Pinehurst, North Carolina neighborhood, so Meghan was left with the trees, rocks and her imagination to pass the time. She didn't know it then, but those days under the southern sun would play a vital role in shaping her adult life.

Not sure if it was the Fisher-Price toy barn set that glamorized the trade, but Meghan had a calling. As

a 21-year-old, the Carolina girl would fall in love with one of America's first professions, farming.

Days after graduating college, Meghan would find herself outside of Atlanta taping tomato vines, laying irrigation lines and packing up blueberries to sell at the local farmer's market. But something was amiss.

“Farming is extremely hard work; it is nothing like what I imagined or dreamt it to be as a little girl,” said Hertel. “After putting the farmer's tractor out of

commission. The writing was in the soil. It was time for me to move on.”

Landing in Sacramento, Meghan believed she could blend her understanding of farming with her love for nature. “You don’t have to do one or the other. We need to figure how to balance both the production of our food with environmental stewardship. How to help the environment in urban and rural areas.”

Audubon California provided just the opportunity. In her role as Director of Land and Water Conservation, Hertel discovered birds offer a key to understanding the overall health of a particular environment.

“Birds, like us, need clean air, clean water, and they are often the first to respond when conditions take a turn for the worse. They are the canaries in the coal mine in nature. Where birds thrive, people thrive.”

Hertel worked with farmers throughout the Sacramento Valley to demonstrate how birds and insects on farmlands can result in a positive impact on crop production.

“Farmers need specific water allocations for fields, or the fields may turn fallow. When they do, people and birds are impacted,” Hertel adds. “Water, food and land are the three main ingredients that boost bird populations, and farm fields can ensure bird species continue to thrive.”

Today, several hundred thousand acres of farm fields in Northern California are not only providing food for people, but are vital for the survival of ducks, geese and shorebirds along the Pacific Flyway year-round.

The experience with Audubon led Meghan to a new post with the California Natural Resources Agency. It is here where she is not only helping farmers and birds, but on the same floodplains, the work has expanded to helping direct actions that will provide fish habitat, recharge groundwater supplies and maintain flood protection for the valley.

As the Deputy Secretary for Biodiversity and Habitat, she is focused in on reactivating the Sacramento River Basin floodplains while also working statewide to help create and foster the development of large-scale habitat projects.

So, in what seems to be twist of fate or a maybe a bit of irony, what was once the great outdoors that watched over her, it is now Meghan Hertel that looks after the great outdoors.



Jacob & David Katz

Chasing Nigiri

From the time he was old enough to slip into a pair of waders, Jacob could be found down at the creek perfecting his fly-fishing technique. In those early days you would find the father and son fishing northern California together everywhere from Putah Creek, little Sierra lakes and the Truckee River. Many times, the fishing trip was based on a random blue dot they found on a map the night before.

“If there was a puddle, we were fishing it,” said Jacob Katz.

When not fishing with his son, David Katz, then, the President of the California Reclamation Board under Governor Jerry Brown, was busy working on new ways to help protect wildlife and vital habitats. It was there he met Huey Johnson, Governor Brown’s Secretary of Resources.

The two men formed a bond with their passion to help protect wildlife and vital habitats in the Golden State. Huey and David knew that the farms versus fish war that was underway was only going to leave

both sides battered and the salmon would be left suffering in the end.

Research showed that salmon that got access onto floodplain wetlands grew much faster than their brethren that remained stuck in the river channel. But, more than 95% of the Central Valley's floodplains were now cut off by levees built to protect cities and farms from flooding. The food was on the floodplain but the fish were stuck and starving in the leveed river channel.

"But the floodplains didn't disappear," said David. "The land-use just changed. What used to be marsh is now rice field. If we owned some rice fields, we may be able to find a way to farm in summer and provide flooded fish habitat in winter."

Knaggs Ranch, a 1,600-acre rice farm in the Yolo Bypass along the Sacramento River – would become the perfect testing ground. David and the team still needed to prove that rice fields to act in the same way as natural wetlands for salmon.

Insert Jacob Katz. By this time Jacob was a fisheries graduate student at UC Davis Center for Watershed Sciences and looking for a research project to sink his teeth into. Jacob took on the seemingly crazy idea of rearing young salmon in flooded rice fields during the winter months as his PHD. They called it The Nigiri Project, after the popular Japanese sushi dish that features a piece of fish over rice.

"That first experiment showed that juvenile salmon who fed in the flooded rice fields grew many times faster than their counterparts in the river," said Jacob, lead scientist with California Trout. "We have expanded the work to floodplain sites throughout the Central Valley."

Jacob and David no longer fish as much as they'd like. But they know it is for a good cause. They now travel up and down California, working with landowners, water agencies, conservation groups

and government agencies on ways to reintegrate floodplain productivity into the way farms and rivers are managed in California.

This multiple benefit model of floodplain management improves flood protection for cities and farmlands while also providing food and habitat for fish and wildlife.

"This model has global implications," added Jacob. "By integrating a working knowledge of natural process into the management of natural resources like rivers and farm land, we are demonstrating that it is possible to balance the needs of people and wildlife, even in the middle of one of the world's most productive agricultural landscapes."

“ We need more biodiversity and we need more of our lands to become resilient to an ever-changing landscape. ”



Mary Kimball

142 Miles and Counting

Much like a pinball, he was seemingly in constant motion whizzing from one side to the other. But, instead operating inside an arcade game, George Kimball was bouncing across Northern California in old Dodge truck delivering some of the best fruits, vegetables, eggs and meats Yolo County farmers had to offer.

George was a farmer himself, but it was just the way it was done back then. In the 1970s, the small farming community was truly a community, and they all banded together to help ensure Yolo-grown

products made it into the hands of their valued customers. It left a lasting impression on George's daughter, Mary. From a very young age she learned how all the pieces of the puzzle fit.

In 1998, Mary helped create the non-profit organization Center for Land-Based Learning, with its primary focus being to educate young people about sustainable agriculture and natural resource conservation through a hands-on approach. Soon the Student and Landowner Education and Watershed Stewardship program or SLEWS was born.

Mary began to solicit farmers about the possibilities of bringing high school students to their properties to assist with volunteer restoration projects. Quickly, farmers found that the plants that were installed by the SLEWS students, with mentor support and oversight, actually performed better than those installed by labor crews. The conservation community, who had experience in planting and management, was the missing piece, and together, Mary now had a perfect formula for success.

In the two decades since the SLEWS program began, high school students, farmers and conservation volunteers have planted 142 miles of riparian hedgerow habitat. That is the equivalent of driving from Sacramento to Reno. From the moment you left downtown until you pulled into the Biggest Little City in the World, accompanying you along the way would be a seemingly infinite line of native trees, grasses, shrubs, and flowering forbs all in a single row. Beyond hedgerows, they have installed buffer strips, plantings around tailwater ponds and riparian areas, erosion control projects, hundreds of thousands of feet of drip irrigation line and hundreds of bird nesting boxes.

Mary knows you don't get there without collaborative effort from farms, students and the conservation community.

“There's no shortage of opportunities, we need more biodiversity and we need more of our lands to become resilient to an ever-changing landscape.”

Mary still leads the Center for Land-Based Learning as the CEO, and also sits on the Yolo County Flood Control and Water Conservation District board. It is in these roles she sees the importance of pairing solid programs with a collective mission to solve wildlife and environmental problems facing the county and beyond.

From the young girl who saw her father play a key role in the success of elevating Yolo County's farmers, it

is almost harder to believe that she wouldn't have achieved what she had set out to do. Especially seeing as collaboration was the key to it all.



“ When we work together to find a common vision, we can achieve incredible results. ”



Amy Merrill

The Collaborative Steward

The rhythmic patter of hooves skimming the earth below was a sound Amy never tired of when she was young. Whether in the hot sweat-inducing summer or the bone-chill frost of winter in upstate New York, the sound was ever-present, because Amy was always riding. With 100 acres and the surrounding landscape of woods, creeks, and farm fields to explore, every grasshopper, hawk and blade of grass were familiar to the adventurous child who rode by each day.

Even so, it was the summers spent in the wilderness of Algonquin Provincial Park in Ontario, Canada

that locked in Amy's love of nature for life. Days at a small all-girls 'off the grid' camp were full of canoeing, portaging, swimming, and playing in the northern woods.

This camp put her so close to nature, some days it seemed as if you could actually reach out and touch the moose or beaver sharing the river. As she entered college, Amy's connection with nature was as strong as ever, but she didn't realize one could make a living helping that very thing she adored.

Before landing in Northern California, Amy served as a large animal veterinarian intern, taught high school science, went to graduate school, spent time with the Forest Service and landed a job with an environmental consulting firm. She learned valuable lessons from each of these experiences and folded them into her work in years to come.

Amy's mother, Sally, always stressed the importance of listening to both sides and the benefits of understanding and supporting your community, no matter the differences in opinion. As the Interim Director of the California Program at American Rivers, one of Amy's central goals is to work with agricultural landowners to protect and improve habitat in wetlands and rivers.

"Collaboration is key. We are finding so many ways farmers can make small tweaks to their field operations which lead to dramatic gains for wildlife."

Adjusting how the land and water is used on these first few farm operations revealed that a greater benefit to people, fish and wildlife could be realized year-round. Amy worked with partners in the Central Valley Habitat Exchange to develop simple tools that can be used to help identify win-win alterations in land use and management that provide big benefits for fish and wildlife. American Rivers and others are using these tools to work with farmers and ranchers from the North State to the San Joaquin Valley.

With American Rivers, Amy is leading a group to restore stream reaches and streamside lands to provide habitat for fish and wildlife and recreational opportunities for local community members in the Central Valley. Amy's team works with farmers, ranchers, developers, state and regional parks and other land owners to find these 'sweet spots' where tweaks in land use and management provide win-wins for fish, wildlife, and people.

"When we work together with farmers, ranchers and other local interests to find a common vision,

we can achieve incredible results. We can protect communities and agricultural lands from floods while providing habitat for wildlife and great recreational opportunities for people. We can have clean, cold rivers and see populations of fish increase while providing respite from the heat along shade-covered banks. This is what a sustainable landscape looks like that we Californians can all care for and be proud of."

It may seem like a long time ago that the young girl was riding her horse around the back country of upstate New York, but the love for nature is as present as ever. Amy is still new with American Rivers, but much like the impression those early years in the wilderness and farmland left on her, she hopes to leave a lasting and positive effect on the rivers, farms, and wildlands of California.



“If we can demonstrate strong collaboration and show the results of successful projects, we can enact change across the entire state.”

Julie Rentner

Bringing Laulima to the Rivers

Growing up, Julie Rentner watched the vast rolling hills north of Mt. Diablo in the heart of the Bay Area get gobbled up by tract homes and paved streets. Her favorite playground along Marsh Creek felt like it disappeared overnight. Her parents saw the hurt in their daughter's eyes, and offered a bit of hope that would drive young Julie for the rest of her life.

“Your work can change things,” they told her.

That mantra first took her to U.C. Berkeley where

she studied forest resources and then onto the University of Hawaii for graduate school. While in the Rainbow State, Julie studied how erosion and sediment coming off the pineapple fields on Oahu's famed North Shore was leading to the bleaching and destruction of coral reefs, and generating a lot of conflict for tourism and growers.

“We were able to reduce the negative impacts from soil erosion by working with the farmers on cover-crop-runoff solutions,” said Rentner.

There's a popular term in Hawaiian culture, Ahupua'a ('ahoo-poo-ah-ah'), which means a subdivision of land from the mountains to the shore. In the 1200s, Polynesian people began to intensify their agricultural practices. In doing so, they came to understand the land and water spanning from the mountaintop to the ocean was interconnected. If you alter one, you could have devastating impacts on the fish, birds, plants and water downstream. Through data and empathy, Julie found ways to work with the Hawaiian farms to make workable changes for the greater good.

Today, she is leveraging that same mindset in her role as president of River Partners. The 20-year-old nonprofit organization brings life back to river landscapes by restoring native ecosystems along some of the most imperiled river corridors in California, including thousands of acres in Northern California.

One of her current undertakings lies northwest of the Sutter Buttes, known as Willow Bend. The site is a crescent moon-shaped parcel that hugs the east bank of the Sacramento River. For years farmers had a tough time turning a profit on the land because of unpredictable flooding. While bad for agriculture, River Partners found this to be perfect for growing young salmon. While there on the floodplain, the fish are able to feast on millions of tiny zooplankton and other insects, growing stronger for their journey downstream to the ocean.

"If we can articulate exactly what flow rate we want when we want it, paired with proper drainage back into the river, then we create a bountiful feeding ground for endangered Chinook salmon."

Willow Bend not only serves as a feeding site for fish, but also makes for great waterfowl habitat. Julie believes the space between the river and agricultural lands is a place where we can work to create a new

water system that benefits people and wildlife. She views this as a Laulima mentality, which translates from Hawaiian to mean bringing many hands together.

"I'm very optimistic how more and more people are working together to solve our water issues. If we can demonstrate strong collaboration and show the results of successful projects, we can enact change across the entire state."





“ If we can prolong the time that fish remain on the floodplains, we will dramatically increase their chances of reaching the sea. ”

Ted Sommer

A Sailor, a Scientist and a Squal

Since as early as he can remember, Ted had always been drawn to the ocean. As a boy, he idolized Jacques Cousteau. A desire to understand the mighty sea burned within him through childhood, adolescence and on to his first year of college, where he would find himself at the docks of his maiden voyage out to sea.

“Marine biology was all I ever wanted to do, and this was going to be the first of many voyages out to the Pacific Ocean...” Ted recalls, “...or so I thought.” Just as the vessel cleared the channel, a relentless volley of waves, twenty feet tall began to batter the

ship, twisting and tossing the craft into directions that baffled even the young scientists.

Ted and many of his fellow classmates were now doing everything they could to keep their lunch. As Ted’s knuckles turned white from grasping the railing, he began to re-evaluate his aquatic dreams. “I wanted to work on projects that mattered, but I realized on that day that the ocean wasn’t my destination.”

At that time, Farmers in the state of Louisiana had been perfecting what was known as rice-crawfish double cropping; a form of aquaculture devised to produce food for humans, independent of supply from earth's oceans. "As I was driving around the valley, I was seeing all of these rice fields and I thought to myself 'we could do more here'...we could use these fields for several purposes," said Sommer.

Clean air advocates had been fighting to ban what was once a common practice of burning rice fields in preparation for the next year's planting season. Ted proposed a multi-pronged solution; by flooding the fields rather than burning them, farmers could clear the crop remains, cut back on smoke pollution, and simultaneously improve aquatic animal habitats.

Ted's solution proved spot on - burning was eventually banned and over time, flooded rice fields became a refuge for shorebirds, ducks and geese. In the decades since, Bird populations have soared.

"One of my roles is to try and to figure how the system works and how to make it better." says Sommer, who now serves as the lead scientist at the California Department of Water Resources.

While bird populations thrived, Ted and his colleagues faced another wildlife crisis as several native fish populations began disappearing from the rivers. When they discovered that these fish populations surged during wetter years, Ted and his team set out to discover why. They studied the Yolo Bypass, a floodplain near Sacramento that also serves as a wetland habitat. Six years later, they reached an illuminating diagnosis - small insects and plankton are most plentiful in shallow waters. A healthy population of these tiny invertebrates offers a vital source of nutrition for young, developing salmon. With more food available, the young fish grow larger and more agile, more able to ward off predators and more likely to succeed in their voyage out to sea.

"The flooding of Yolo Bypass was first thought by many to be a death trap for young fish. We uncovered that the floodplain served as a massive nursery and food bank, we just needed to create access. If we can prolong the time that fish remain on the floodplains, we will dramatically increase their chances of reaching the sea."

With support from the Department of Water Resources, Ted has teamed up with Sacramento Valley farmers, reclamation districts, agencies, and universities to create projects that allow for more direct flows into the Yolo Bypass. If successful, this coalition of farmers can replicate rainy seasons even in times of drought. By managing direct water flows to the Yolo Bypass through the Colusa drain and the Wallace Weir, more food can be delivered to the fish.

"We have 20 years of data that shows when there's food and habitat, the fish thrive. Even in dry years, managed flooding can have a big influence on our ability to save these endangered species."

While the outlook for fish populations may appear grim, Ted finds himself hopeful, borrowing a quote from Jacques Cousteau - "If we were logical, the future would be bleak, indeed. But we are more than logical. We are human beings, and we have faith, and we have hope, and we can work."

Ted Sommer now serves in one of the most important positions a scientist can serve in the state of California - and he may just be one of the most influential people helping native fish today. It could be argued that Ted may have had a similar impact on the ocean if it hadn't sent him back to shore, battered and queasy, but one thing is for sure - California's endangered fish will be happy it did.



Jeff Volberg

Dreams of a Cowboy

Even as he dreamt of herding cattle on ranch lands in Northern California, a body of water was ever present in that cowboy fantasy. Whether a pristine lake or a rippling river, the youngster was always drawn to the beauty these waterways imposed on the landscape. Some 60 years later part of that dream was no longer a mere object in the background, yet has taken center stage.

As a UC Davis student in the 1970s Jeff Volberg studied agricultural business management in hopes of making a career on the farm fields and ranches

that dotted the West. But after four years of working on remote ranches in Northern California and Nevada that dream started to fade. It was a lonely life, with no prospect of a long-term home and family. A more conservative approach to a career took form, and the onetime wrangler no longer wore blue jeans and boots, but now suits and ties.

Landing a job in farm finance, Jeff soon became astutely aware of how much water played a role in a rancher's or farmer's livelihood. By the time he was in his early thirties, Volberg was attending law

school at night and a sharper focus on water law and regulations came into view.

After working with Southern California grapefruit farmer Dave Kelly, then to serving as a consultant to the State Assembly Water, Parks & Wildlife Committee and finally as the Government Relations Manager for the San Diego County Water Authority, Jeff was ready to move on from water issues and set off into retirement. That ride would have to wait. The California Waterfowl Association would come calling Volberg became the non-profit's first Water Law and Policy director. The new role has Jeff working on behalf of duck and geese populations to ensure they have adequate habitat to feed, raise their young and rest during migration to and from the southern and northern hemispheres.

“This is the most rewarding job I have ever had. There are so many great people working because it is their passion, they are not here for the money.”

Pulling on his work of the past, Volberg is combining collaboration and his expertise in water policy to preserve and create suitable wetlands. Which means not only working with federal and state protected lands, but now farmers who can help aid in providing habitat during the fall and winter months – a critical time for migrating birds.

In the Sacramento Valley that means working to advance water projects and funding to help keep populations at healthy levels. In the Yolo Bypass, Volberg is collaborating with landowners, NCWA and state agencies to ensure habitat remains suitable for birds accustomed to finding refuge in the low-lying wetlands. In years past, issues like this may have been contentious, but Volberg says its uplifting to operate in this new climate.

“Rather than retreating into the respective corners and blaming government for their woes, it is great to see a large consortium work together to find solutions. The approach from farmers and ranchers

in the Sacramento Valley is positive, inclusive, and usually lends to the best result as so many different interest groups are involved in water issues.”

While he never became the cowboy he once dreamed to be, Jeff has found his path may serve a greater purpose. For while he may have overseen a few thousand cattle had he become a cowboy, today as a conservationist, he gets to help millions of waterfowl each and every year.



Personal Stories

Water Managers





“The opportunity is ripe for all of us to work together for a future where we reimagine a Valley that can serve multiple benefits.”

Lewis Bair

The Optimist

It was supposed to be just like the other trips they took to the Sonoma Coast. But this time, they wouldn't make it to Fort Bragg for the Memorial Day Weekend holiday. Parked along a two-lane road, the brake-line in their RV-Bus conversion failed and the Bair family was tossed about the camper as it rolled several times down the steep embankment.

Three-year-old Lewis Bair came away with only a few minor cuts and bruises. His parents, Sheryl and Lewis, 18 and 21 years old at the time, were both

paralyzed in the accident. That single moment may have changed everything – but it didn't limit who the Bair family would become or how they would act from that point on.

“To my parent's credit, we did everything that other families did,” said Lewis Bair, III. “They may have had physical challenges but it never stopped them from living life to the fullest.”

His parents would not let that one fateful day ruin their rest of their lives. In fact, life would be

tackled with a new found determination and zeal. An outlook that has shaped how the younger Lewis goes about his job as general manager of Reclamation District 108.

“When problems arise or we run into difficult challenges, I think about what my parents had to do and it reminds me that we can overcome anything that comes our way.”

As the lead water manager of one of the oldest reclamation districts in the state, Lewis is confronted with the task of delivering water to landowners who are growing rice, walnuts, tomatoes and other crops with the needs of wildlife that depend on the precious resource for survival. Bordering along the Sacramento River, RD108 has been a leader in flood control since the 1800s, it developed new irrigation techniques in the 1900s and now in the 2000s, is setting new standards of how to integrate fish and birds into its everyday practices.

“We know that the health of salmon and migratory birds relies on how and when we use our water. RD108 has built fish screens to prevent juvenile salmon from veering off into irrigation canals, helped foster programs to grow fish food on fields to offer nourishment for salmon in the Sacramento River and have been flooding rice fields in the late fall and winter to provide shore birds and waterfowl rearing habitat sites along the Pacific Flyway.”

Over the last 150 years, RD108 has rarely shied away from addressing the largest issues of the day. The people of RD108 have rarely made a determined effort to do what is right for people and wildlife. Not only has Lewis helped continue that spirit, he has fostered relationships and expand the district's work with conservation groups to determine the best practices in creating wildlife habitat – while still maintaining functioning farm lands.

“I truly believe this is a special moment in time where we have significant alignment among state and

federal agencies, environmental organizations, fishing groups, tribes and farmers who are all energized to change the narrative around resource management. The opportunity is ripe for all of us to work together for a future where we reimagine a Sacramento Valley that can serve multiple benefits.”

It is the perfect attitude for a job that is requiring more patience, understanding and collaboration than ever before.

Lewis doesn't remember the accident that changed his family's life, but the aftermath is still felt today. While it was devastating in one way, in another it has helped shape a man who is leading with a belief that together we can create a better future for the entire Sacramento Valley.



“ Every decision has an impact...we need to be transparent to ensure the best possible balance for all. ”



Thad Bettner

Going with the Flow

While some prefer to just “go with the flow” – Thad Bettner is the flow. He is the one constant motion, continuously engaging the journey even if it seems riddled with challenges along the way. Active is a perfect adjective for a man who spends his days entrenched in water resource and environmental management issues as head of the Sacramento River Settlement Contractors.

His journey to executive director started in a small town south of Santa Barbara named Carpinteria, a spot famous to surfers looking to ride the waves off Rincon

Point or to those who can’t resist a sprawling ocean view as they hike the western slope of the Los Padres National Forest.

“For me, it didn’t matter what it was, as long as it was outside. My brothers and I were always at the beach – it seemed as if we practically lived in the water,” says Bettner.

Outside is also where Bettner was during breaks from school, staying with his grandfather in Los Banos. While the Central Valley didn’t have

waves, it had seemingly endless ponds of water in the wintertime that were perfect for duck hunting. Those early mornings on the wetlands gave Bettner a deep appreciation for not only the environment.

After high school, Bettner didn't venture far. Remaining on the Central Coast, he attended California Poly - San Luis Obispo, studying Agricultural Engineering with a focus in water delivery. "I was able to apply my undergraduate work on optimizing efficiencies in water deliveries to help the Fresno Irrigation District become a leader in water management practices."

Various drought cycles had forced many farmers to turn to heavy groundwater pumping. Bettner and the FID team began one of the first groundwater recharge programs in the state. "It was something 30 years ago that wasn't top of mind in the industry, but we knew it was all connected. We couldn't have adequate surface supply without knowing the state of the groundwater system."

After spending 16 years with Glen Colusa Irrigation District (GCID), Thad is now leading the Sacramento River Settlement Contractors – which represents 138 cities, farms and ranchers from Chico to the capital city. He says balancing the needs of landowners and wildlife is no easy task.

"We have a duty to make sure we can sustainably grow crops, raise livestock and ensure we have thriving communities, but it also means we must find ways to improve and maintain habitat and food sources for birds that migrate along the Pacific Flyway, our local terrestrials, and the Chinook salmon that navigate the Sacramento River."

From spawning and rearing habitat to fish screens to flooding rice fields for waterfowl and shore birds, to managing flows for temperature needs of salmon, SRSC are working to reinvigorate an ecosystem ignored for far too long.

"These choices don't come easy. Every decision has a tradeoff and an impact somewhere and we need to be honest and transparent to ensure the best possible balance for all."

When he feels limited by roads or trails, Bettner has found an unlimited amount of space in the skies above. From the pilot seat of a Cessna 182 Skyline single-engine airplane, he looks down upon the farm fields and irrigation canals sprawling in all directions. From here, he often finds a new perspective.

The waves, the road and the sky offer Thad the perfect balance to see not only the best way forward but the alternate viewpoint as well. It has helped him solve complex problems in the past and is offering a sense of confidence to address future issues as well. In a new era of water management, it is exactly what will help achieve the greatest results.



“It is through focused coalitions that we can truly make difference.”

Roger Cornwell

The Many Benefits of Growing Plump, Gourmet Bugs

It is the dead of winter but the rice fields in the Sutter Basin are full of life. It's the slowest time of year for most farmers; crops have been harvested and the spring planting season is months away. While most farmers patiently await the turn of season, fields southwest of Yuba City are busy producing a new type of food.

Roger Cornwell, the General Manager of the Basin Irrigation and Drainage Authority, knows there isn't any money in growing tiny insects, but he's banking on it leading to riches in another sense. The spineless

orange bugs, known as cladocerans but also called a water flea, are no larger than a grain of rice, but they are the preferred meal of California's Chinook salmon. Partnering with UC Davis, California Trout and State Water Contractors, Cornwell is hoping these tiny crustaceans thriving on his member's rice fields can lead to a rebound of the salmon's declining population numbers.

“There just aren't enough of these insects in the Sacramento River to properly feed juvenile salmon,” said Cornwell. “The water is too cold and swift for

the bugs to survive, leaving many malnourished salmon that are simply not strong enough to reach the Pacific Ocean.”

On rice fields however, these bugs reproduce with enthusiasm.

“When the fish are able to eat these insects found on the rice fields, the salmon grow three times the size of their counterparts which are forced to only eat what’s currently in the river,” said Cornwell. Now endearingly known as floodplain fatties, the increase in physical size is a positive indicator for survival; a promising development in the troubled history of this Northern California native species. Growing stronger, more agile and with the ability to prevail when food supplies are low, these floodplain fatties are seeing far improved odds at making it to the Pacific Ocean.

Since the fish can’t swim out onto rice fields, the partners have created a Blue Apron-style food delivery for the salmon.

“The process is fairly simple. We are borrowing the water from the river during the winter months, letting it sit out on the rice fields for a few weeks and then delivering the water back into the river recharged and full of bugs.”

The insects are able to reproduce at significant rates once sunlight breaks down the remaining rice straw, turning it into algae. The bugs feed off the algae and after a few weeks, the water is drained into the river for the young salmon. Then begins an epic chow down that would make Joey Chestnut look like an amateur.

We want to create an all-you-can-eat buffet for these salmon to help increase the number that will eventually return to spawn in the upper channels of the Sacramento River.”

It is there in the upper channels where you will find another significant project his district is leading

to help salmon. Located on the edge of Redding, Cornwell has partnered with scientists, Northern California Water Agency, National Marine Fisheries Service, Western Shasta Resource Conservation District and the US Bureau of Reclamation to provide salmon fry with shelter from larger prey.

Using walnut trees bolted to granite boulders, the “rockwad” structures serve as protection from the swift current and larger predators. The program is already showing great progress.

“We believe we can play an important role in helping salmon in various times of their lifecycle. All it takes is collaboration instead of infighting, and it is through focused coalitions that we can truly make a difference.”

For Cornwell, the efforts won’t stop with these projects. As he sees it, the Sacramento Valley is just getting started.

So next time you see a flooded rice field in the middle of January, it may just be a farmer in the middle of his bug- growing season.



Sean Earley

The Fixer

The sight of cigarette smoke spiraling upward toward the porch ceiling is an image Sean Earley will never forget. In the scene, his grandfather is leaning back on the wood bench resigned to his sweat-drenched plaid shirt and dirt-caked boots, all in an effort to locate a moment of peace before the sun falls below the horizon.

Even as a teenager, Sean knew there weren't enough Marlboro Reds to settle his grandfather's anxiety of making ends meet. As a farmer tending to several hundred acres in the belly of the Central

Valley those meditative sessions did little to reduce his grandfather's fears and typically led to sleepless nights for more than 50 years.

Somehow, these daily rituals did not dissuade Sean from pursuing a career in agriculture. As a high school graduate, Sean was working part time for his family laying irrigation lines. A firefighter friend of Sean's offered a way to make more a little money while still helping out on the farm – "fight fires," he said. Sean signed up as a volunteer firefighter in Merced and was soon working as a seasonal firefighter/EMT for Cal Fire.

While “dealing with a wildfire” or “putting out fires at work” is often a metaphor in business for issues that arise out of nowhere, Sean was actually putting out major wildland fires. It was then that he began to realize his skill to think through complex problems before him. Though, sometimes he needed a bit of jolt.

“When I got to Chico State, a professor named Dave Daley saw that I was just sort of floundering. Had no real direction. He offered me a job that was 30 miles away, did not pay and I had to wake up at 5:00am on Saturdays.”

The “job” was that of a ranch hand on a working cattle operation and he quickly fell in love with it. Soon enough, he was in charge of a “couple hundred head of cattle” and then began working with the university in helping to better understand DNA and fingerprinting of cattle. His role at Chico State would mean managing complex budget and navigating through various funding streams. Something the Butte County Fair needed when it fell on hard times.

His reputation of a “fixer” quickly spread throughout the north state and Richvale Irrigation District came calling. The District may hold some of the oldest water rights in the state of California, but Sean has help lead a strong effort to make the most of every drop. The district does not pump groundwater to fulfill delivery orders, so it relies on what water comes from the Feather River. Which is why metering every landowner was critical to ensure they could maximize savings in dry years.

“With the same amount of water delivered during dry years, we are now able to farm about 15% more acres than in the past because of water-saving measures.”

Sean says the metering and monitoring will only take the district so far in conservation. He believes more storage will be needed if the district is to continue to provide water not only for crops like rice, but for wildlife habitat in the winter as well.

“With our climate changing and our deliveries no longer as consistent as they once were, we face great challenges in ensuring people and wildlife can thrive in the valley.”

He may no longer be staring down a wall of flames or a floundering county fair, but the water issue has become even more daunting. For Sean Earley there hasn’t been a problem he has been unwilling to tackle, and it is this type of attitude that will ultimately help us find a solution to ensure a balance we all are seeking.





“ We will find a way to keep farming, provide drinking water, and create habitat for our native species. ”

Andy Fecko

The Perfect Combination

At just eight years old, Andy was set free into the woods. To be clear he wasn't abandoned. This was the early 1980s and kids were given immense freedom to explore the outdoors on their own accord. Spared from the fears of parents today, the brown-haired boy with dust coated jeans and a t-shirt would navigate the Tahoe National Forest with his younger brother and cousins. Their mission: explore the unknown and catch as many crawdads as possible. It was in those early adventures that Andy grew quite fond of the towering pines and bending shorelines of the valley rivers.

While attending the University of California – Davis, Andy studied natural resources and engineering, providing him with a foundation in fish biology and water delivery systems. Quite useful for someone who joined the Placer County Water Agency a few years later. Hired on originally to help with a hydro-electric power project and Sites Reservoir, Andy says a job in water resource management was much simpler back then.

PCWA's watershed begins at 8,000 feet, with water storage sites hovering around 5,000 feet and many

of its customers in agriculture and cities located on Placer County's valley floor which stands at or below sea level. "For more than 50 years the challenge was to keep up with demand, but catastrophic wildfire in 2014 changed everything for us."

The King Fire burned 97,000 acres in the El Dorado National Forest – leaving a devastating and torched landscape in its wake. Burning into the famed Rubicon area, PCWA's water sources were impacted. PCWA chose to take aggressive measures to mitigate future risks. Andy and his staff got to work on what is known as the French Meadows Forest Restoration Project. The first private-public partnership aimed at thinning the forest in order to prevent major wildfires continuously devastating our environment.

"A healthier forest means better habitat for wildlife, improves the tree's resistance to drought and diseases and improves the watershed for all species who rely on it for survival."

The work PCWA has already done got the attention of the White House in July of 2022, as Andy is now a member of the newly- established Wildland Fire Mitigation and Management Commission. The group will play a key role in recommending ways that federal agencies can better prevent, mitigate, suppress and manage wildland fires. The members additionally, will aide in policies and strategies on how to restore the lands already affected by wildfire.

The PCWA is tackling habitat and migration issues below and above Folsom Dam. The agency has partnered with other water resource managers in order to help migrating salmon reach their destination though the construction of fish screens and newly-adopted water release schedules.

Andy is looking at all of this today through the scope of the boy who wandered the woods, the teenager that cast his line in the river and to the man who is responsible for creating a functioning water system. His love for the outdoors, studies in biology and

desire for efficient engineering was once a rare find among water managers – but today, his experience and outlook is almost required.

"We are charged with bringing our ecosystem back into balance. We can and we will find a way to keep farming, provide safe drinking water in our homes and create habitat for our native species. It may not happen overnight, but we are taking steps today that will positively impact the future of California."



“ We had to come up with a sustainable plan to ensure the next generation of farmers could work these lands. ”



Kristin Sicke

Destined for Great Water

If you faced the ocean from your beach chair on the warm smooth Carlsbad sand, you'd be hard pressed to miss the young, blonde-haired girl splashing in the waves. You'd have a sense that this girl came to this spot often, and you could even surmise this girl would likely spend her life in the water.

Fast forward to today, and you'd have been correct, only maybe not the water-focused job you were envisioning. While most kids who live near the ocean have dreams of becoming a marine biologist or professional surfer, Kristin was unsure

of what she wanted to do. She was just certain that she needed to spend her time in water.

Her college decision brought her to the Sacramento Valley. Earning a master's degree in Civil and Environmental Engineering from the University of California – Davis, Kristin was given a crash course in water resource management.

“I was very interested in evaluating alternative water supply solutions for vulnerable communities. Growing up in southern California instilled an

immense appreciation of the State's water storage and delivery system," said Kristin Sicke, General Manager of the Yolo County Flood Control and Water Conservation District.

This curiosity landed her the job at the Department of Water Resources. Learning the intricacies of water supply and flood management at the state level, Kristin began to aid local agencies all over California in various technical assistance and funding programs available. It is in this role she would meet Tim O'Halloran who would bring her to Yolo County.

With Tim's retirement on the horizon, he helped her gain the confidence to deal with the complexities of managing a local irrigation district in wet and dry years. With the landowners' water supply under constant threat, the District has had to shift the way they manage their precious resources. Covering more than 200,000 acres and providing water for 110 customers and roughly 20 industrial contracts, managing the District requires a great deal of patience, flexibility, and ingenuity, especially when surface water availability and irrigation deliveries don't come as they once did. Paired with junior water rights that only allow storm flow diversions from Cache Creek when there is excess water in the Delta, the District has had to think creatively and effectively optimize groundwater and surface water management.

"In 2015, we started a formal winter recharge program to ensure our drought reserve, groundwater, was available in dry years. We knew we had to come up with a sustainable plan to ensure the next generation of farmers could work these lands."

At the time, groundwater recharge was becoming not only an idea, but a practice. Since then, the District has been on the forefront of replenishing groundwater supplies during the rainy season. With 160 miles of unlined canals, the dirt-lined irrigation channels help funnel about 25% of the surface water back down below the surface.

In 2016, the District successfully put back 11,000 acre-feet of water and in "excess" years has been working to maintain that level of recharge. A major benefit is the ability to monitor 26 of the 130 groundwater wells in real-time. Since the 1970s every well has been measured once in the spring and then a second time in the fall, it gives the District a clear understanding of how much groundwater is used and available each year.

With the District facing the worst drought period in its history, Kristin believes responsible recharge and efficient surface management will get them through these tough times. And even during boom years, she says the District will need to remain focused on continuing to recharge groundwater supplies.



“Creating opportunities and projects that maintain reliable water delivery while protecting wildlife is the way of the future.”

Jeff Sutton

Coming Home

There is a saying that goes; “you can never go home again,” but Jeff Sutton is proving you can.

The phrase refers to our tendency to have unrealistic or only nostalgic memories of where we spent our formative years, but for Sutton, he is returning to the irrigation district his great-great-grandfather helped create and the place his family has called home for more than 150 years. What he plans to do next, is not relive the past, but help usher in a new era for the Sacramento Valley.

In the 19th-Century, the Suttons ventured west seeking new opportunities and a new way of life. They’d end up on a plot of land just north of what is now the town of Maxwell. Soon after planting their first crops, George Mock Sutton set forth a family tradition of servitude to the region. George was appointed to create a new irrigation district to serve the influx of new landowners in the western part of the Sacramento Valley. The Central Irrigation District, now known as the Glenn-Colusa Irrigation District, was born.

“I like to joke, that my great-great-grandfather worked on my future employment 150 years before I got the job,” says Jeff Sutton, General Manager of GCID.

Following George, was Louis Sutton, Jeff’s great-grandfather, who became the second Sutton to be elected to the Colusa County Board of Supervisors. But Louis’ public service would not stop there, he wound up representing the valley for two decades in the state legislature, even serving as Chairmen of the Senate Water and Agriculture Committee. In 1956, Louis took the family’s first step into wildlife conservation as the Senator worked diligently to institute a ban on gill nets for salmon fishing, understanding the importance of keeping sustainable fish populations and reducing harm to the environment.

Jeff’s father, John, followed suit and spent 22 years on the GCID Board, helping lay the foundation for many multi-beneficial projects in the district.

It seemed Jeff was destined to follow his family into water management. After spending time as a water law attorney, Jeff landed at the Tehama-Colusa Canal Authority (TCCA). Jeff says one of his biggest achievements while there was the completion of the Red Bluff Fish Passage. A \$185-million project to replace the old Red Bluff Diversion Dam, with a new pumping plant and quarter-mile long fish screen.

“Creating opportunities and projects that maintain reliable water delivery while protecting wildlife is the way of the future. We can blend economic responsibility and wildlife sustainability.”

Jeff will take this mantra to his new, yet old, home at the Glenn-Colusa Irrigation District in his role as the district’s newest general manager. GCID serves 1,200 water users across 140,000 acres of farmlands and 20,000 acres of federal wildlife refuges. As head of the GCID, Jeff wants to ensure farmers can continue to grow crops that feed the world while also playing a larger role in supporting threatened species.

Whether it be seeing the completion of Sites Reservoir, flooding fields for migratory birds or improving conditions for fish, the fifth-generation Sutton to live, work and serve in the district is ready to tackle new and old challenges. While Jeff knows coming home isn’t easy, he says this has been a century-and-a-half in the making, and there is no doubt he will give it all he can to help create a Sacramento Valley that is thriving both economically and environmentally for generations to come.



“ We know we have to evolve and look forward if we want to keep up with demand in the boom-and-bust years. ”



Ted Trimble

Never Counted Out

He nearly called balls and strikes for a living, but thankfully for the Chinook salmon, he chose to count fish instead. Ted Trimble was on his way to becoming a baseball umpire before he decided to stick with his job as waterman in a small community south of Chico.

He had a family friend who suggested working for the Western Canal Water District and in the first couple of years, Ted felt like he had made the wrong move. He loved baseball as much as anything growing up and umpiring school in Florida seemed like his next

big move. But something was happening along Butte Creek and Ted didn't want to miss out on what he thought could be an opportunity of a lifetime.

“The general manager at the time asked me to take on the district's special projects. Some dams were set to come down in Butte Creek, I knew it was something I wanted to work on for the district,” says Trimble who now serves as General Manager.

A background in physical and natural sciences with a specialty in hydrology, Ted rediscovered why he had

come to Butte County in the first place. It was 1997 and the removal of four old dams along the creek had just begun. Western Canal, the US Department of Interior, California Urban Water Agencies, state fish and wildlife, and other private contractors came together to help create a system that would still allow for irrigation to farms, but also create unimpaired access for salmon making their way to spawning sites upstream.

Within one season of the dams coming down, spring-run salmon totals went from less than 200 fish a year returning to spawn, to more than 10,000. By the early 2000s when fish screen diversions and ladders were built, between 16,000 and 18,000 fish began to return to Butte Creek.

“Before the restoration project, everyone seemed to be at odds with another. Farmers, environmentalists and government agencies all had different priorities and ways to best manage water. This effort all brought us together.”

Western Canal and Ted Trimble are not done yet. The district, which is responsible for irrigating 60,000 acres of land and delivering water to some of the leading rice growers in the state, is also busy working to maintain historic healthy groundwater levels. It is part of the district’s approach to ensuring each water drop provides multiple benefits. The water that is used to grow crops in the spring and summer is now being used to provide bird habitat in the fall and then groundwater recharge in the winter.

“We are in the midst of modernizing our entire system. We know we have to evolve and look forward if we want to keep up with demand in the boom-and-bust years we’re experiencing.”

Droughts and the increase of atmospheric river-like storms are rewriting the rules for water management in the state of California. That means for managers like Ted, collaborative projects will likely become the

new normal when it comes to water delivery, storage and usage in the Sacramento Valley.

His days of playing sports taught Ted how to be a team player which is helpful in navigating complex partnerships. Baseball has also given him the confidence to know even when the count is against you, there is always a chance of making a dramatic comeback. He sees that with the salmon.

“They may be down, but there is hope on the horizon, projects like Butte Creek show us what we can do even when the odds are against us. We just need to stick together and focus on the ultimate goal.”





“ We are constantly evolving, and we’re going to have to adapt if we want to protect our way of life here. ”

Willie Whittlesey

The TreeGazer

His neck bent backward allowing his eyes the chance to follow the bark line to the top of the towering pines reaching toward the majestic blue above. Beneath his gaze flowed a forest green ocean of pine needles pinching the branches as so they would not be lost to the wind. The whistling sound the breeze made as it forced itself between tree gaps sung in harmony with the crackle of the splintered sticks and shattered leaves that fell victim to a pair of Danner boots exploring the forest floor.

Whether he was searching for it or not, Willie had found it.

The beauty and peace this place offered burrowed itself deep into Willie soul, leaving an impression that would remain for a lifetime. Still in his teenage years, Willie’s career was not a chart-topping concern consuming the brain, but there was little doubt that “out here” is where Willie Whittlesey needed to be.

Working with his uncle, a timber faller in Nevada County, provided an education in how drought can make a significant impact on higher elevations. A topic less commonly discussed back then, as it is today.

“I didn’t know it at the time, but that real-life experience in the forest played a big role in how I think about water management and conservation today,” said Whittlesey.

His passion for the forests and a career in water management were destined to meet head on. Willie joined the Yuba Water Agency to help with hydropower sales but in short time, he would become the agency’s general manager. Willie is now charged with helping manage one of the most historic river systems in Northern California. At the crest where its headwaters stand 8000 feet above the Pacific Ocean, the Yuba River travels a distance of 100 miles west where it settles at 70 feet above sea level at the confluence of the Feather River south of Marysville.

It is near the base where the Yuba Water Agency is responsible for assisting in flood protection, hydropower generation, water quality standards and water deliveries to landowners. While it may appear most of the agency’s duties are focused on parts of the valley, Willie believes in a much different approach.

“We want to be seen as a solution to the many challenges we are facing in the state. To do that, you must take on a top-down viewpoint.”

Which means thinking about where that first drop of water falls at the summit to when it exits the watershed in the Feather River. Willie believes this ridgetop to river mouth approach is the best way to ensure water security and quality for not only Yuba Water Agency’s users, but everyone in the north state.

Willie’s passion and forward-thinking has led the agency to engage in several more collaborative partnerships and initiatives in hopes that they can

reduce catastrophic wild fires from having devastating impacts on wildlife habitat, homes, working lands and the water supply. With the intensity of the fires and an increasing number of drier years, Willie believes agencies can no longer take a siloed or single-focus when it comes to water management.

“We are constantly evolving, and we’re going to have to adapt if we want to protect our way of life here.”

Willie no longer spends his days amongst the firs and pines, but when he needs a reminder of how he got to Marysville, it is only a short drive along Highway 20 to the place where this all began. While the journey is far from over, the entire Yuba watershed is much better off having Willie Whittlesey on its side, as there is little doubt, he can truly see the forest from the trees.



NCWA
Northern California Water Association

