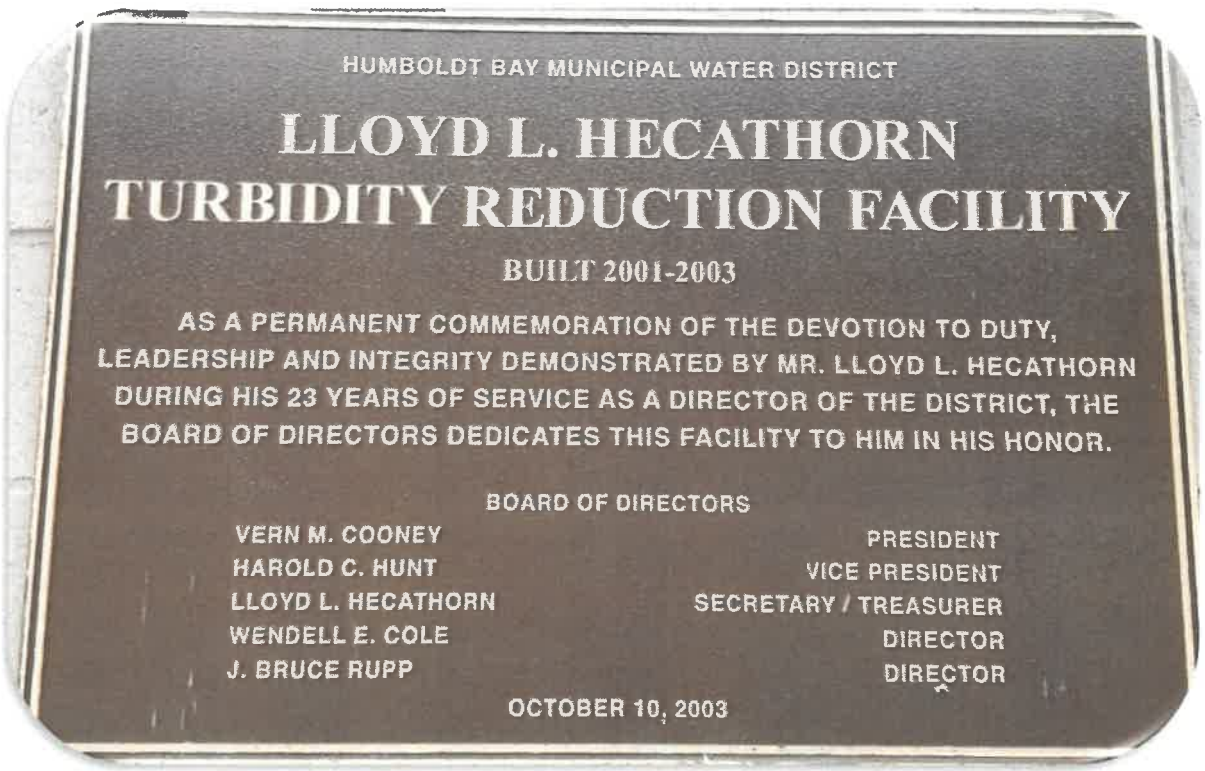
HUMBOLDT BAY MUNICIPAL WATER DISTRICT

Board of Directors Meeting

February 2020



MINUTES

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
828 7th Street, Eureka

Minutes for Meeting of Board of Directors
January 9, 2020

A. **ROLL CALL**
President Woo called the meeting to order at 9:00 am. She stated Director Fuller would arrive around 10:30 am. Director Rupp conducted the roll call. Directors Latt, Rupp and Woo were present. General Manager John Friedenbach, Superintendent Dale Davidsen, Business Manager Chris Harris and Board Secretary Sherrie Sobol were present. Mr. Pat Kaspari of GHD was present for a portion of the meeting.

B. **FLAG SALUTE**
President Woo led the flag salute.

C. **ACCEPT AGENDA**
President Woo requested Item H4 be taken up when Director Fuller is present. On motion by Director Rupp, seconded by Director Latt, the Board voted 3-0 to accept the agenda.

D. **MINUTES**
On motion by Director Rupp, seconded by Director Latt, the Board voted 3-0 to approve the Minutes of the December 12, 2019 Regular Meeting.

E. **PUBLIC COMMENT**
Mr. Jerry Martien addressed the Board. He submitted his resume for the Division 3 Director position. He stated regrettably, he must withdraw his application and wished the Board well.

F. **CONSENT AGENDA**
Newspaper articles of local/water interest
Director Rupp pulled two articles. The first was regarding lead pipes. He inquired if the District had lead pipes. Mr. Davidsen stated there are no lead pipes in the main distribution system. Staff is reviewing some of the smaller lines but doubts they will find lead pipes.

The second article pulled was "State says damaged Shasta County dam not an emergency". The dam was damaged during storms earlier this year. Pipes were plugged with debris and covered with sediment forcing water over a spillway. Director Rupp expressed concern for watershed management and our dam given the recent fires and storms. He acknowledged that Mr. Friedenbach has been working Six Rivers Forest Service on the issue. Mr. Friedenbach confirmed he has been working with the Forest Service on watershed management and is also looking into grant funding opportunities. Mr. Davidsen stated the 2015 fires burned areas above three sides of the lake. Director Rupp stated his concerns are lessening given that after two big fires and storms, the area is in good shape overall.

On motion by Director Latt, seconded by Director Rupp, the Board voted 3-0 to accept the Consent Agenda.

G. **CORRESPONDENCE**
2019 Quagga Inspection Summary from Ruth Lake
Mr. Friedenbach shared the results of the 2019 Quagga inspections. He noted that the new manager, Ms. Caitlin Canale provided the report. Three watercraft were turned away due to standing water. He also provided information regarding inspection summaries for the previous five years. He stated he plans to visit the three remote inspection locations to follow up on the inspection process and qualifications of the inspectors. Director Rupp learned of software program called Basecamp which other agencies are using as part of their Quagga prevention program. He recommended the District look into it.

He also shared that he offered to do an orientation meeting with Ms. Canale. She will be meeting with staff here at the District soon to discuss items of mutual interest to our Districts such as Quagga Prevention, Lease Lots, and illegal water diversions.

Proposed Urban Water Conservation Reporting Regulations, comment letter
During the drought, emergency conservation measures including monthly reporting for urban water suppliers was required. The State proposes to continue this reporting. Mr. Friedenbach shared the letter he sent requesting the State Water Resources Control Board introduce flexibility in the new regulations to account for varying local water supply conditions, such as ours.

CalOES / FEMA 2019 Storm Damage Reimbursement
A reimbursement request for the Collector 2 Cable Car Shed was approved for $149,549.00.

CalOES / FEMA 2019 Storm Damage Reimbursement
A reimbursement request for the Collector 2 Supply Line Break was approved for $50,454.00.

H. CONTINUING BUSINESS

Water Resource Planning

Local Sales

Mr. Friedenbach stated staff is meeting with Nordic next week to discuss water quality and supply operations. Staff met with the Samoa Peninsula Stakeholder Group to further discuss peninsula infrastructure and upgrades funding. Mr. Friedenbach reiterated the District's concerns to the group regarding joining a JPA as it affects our financing ability. A progress report from the working group is scheduled to be released later this month.

Transport

No updates

Instream Flow

Mr. Friedenbach stated the process is moving forward and the District received grant reimbursement in the amount of $158,000. President Woo stated they are currently working on refining the project description.

Cannabis affecting Mad River Watershed
Mr. Friedenbach stated he and Mr. Davidsen went to the Vivid Green site and saw the area Vivid Green is proposing to transfer to the District. The area is of similar terrain and seems to be a fair trade. He noted there are no utility right-of-way to deal with on the property either. He shared photos with the Board.

Board Vacancy
Mr. Friedenbach stated initially, there were three applicants, however Mr. Martien withdrew his application this morning. Director Latt stated one of the applicants is a client of his and to avoid any perception of conflict, he recused himself. He commented as a member of the public that both candidates are excellent and then left the room. Mr. Friedenbach discussed next steps in the process including special meetings. Since there are only two candidates, the Board decided no special meeting was needed on January 29 at 4 pm. They agreed to keep the Special Meeting on February 26 at 3 pm to interview candidates.

Safety Incentive Reward changes
Last month, the Board requested staff bring back options regarding the safety incentive program. Staff provided five options which Mr. Friedenbach discussed. He stated he feels it is important to keep the

safety incentive and prefers Option 1 which is no change to the existing program. Director Latt inquired what the preference was from Mr. Davidsen and Ms. Harris. Mr. Davidsen stated he believes the safety program has value and he is fine with leaving it as is. Having said that, he will do whatever option the Board selects. Ms. Harris stated in the past, the Eureka office staff voluntarily excluded their names from the safety drawing. She felt staff diminished their value in doing so, since they are held to the same safety standards. Option 4 to replace the safety incentive award program entirely with an employment anniversary acknowledgment award program was her idea. Director Rupp shared some graphs from the JPIA. They showed that cost wise, claims from clerical and water crew are about the same. Based on the data, he feels the program should remain as is. Director Fuller stated she did not want a take away of money and supported keeping the program as is with everyone participating. Director Rupp agreed that ALL should participate. The Board agreed to not make any changes and keep the program as is with all employees participating.

I. **NEW BUSINESS**

Officer and Committee Assignments

The Board decided to wait until the Division 3 Director position is filled before discussing and taking action. On motion by Director Rupp, seconded by Director Latt, the Board voted 3-0 to table the discussion until the March 2020 meeting.

LAFCo request for nomination

Mr. Friedenbach stated that LAFCo sent out a request for nominations for District Members to serve on the LAFCo board. He stated only elected officials can serve and inquired if any of the Directors were interested in being considered for nominations. No Directors expressed interest at this time.

CLOSED SESSION

The Board entered into closed session at 2:10 pm to discuss Public Employee Performance Evaluation for General Manager (pursuant to Section 54957(b)(1).

The Board returned to Open Session At 2:35 pm. President Woo stated there was nothing to report.

Abandoned vehicles at Ruth

Mr. Friedenbach shared photos of the four abandoned vehicles on District property at Ruth. He discussed various avenues to pursue removal options as well as options to block future access to the area. Staff is requesting the Board authorize a current fiscal year budget of $20,000 for removal of the existing abandoned vehicles and direct staff to seek recovery of funds spent from the last registered owner of the vehicles/trailer. On motion by Director Rupp, seconded by Director Latt, the Board voted 3-0 to approve staff request.

Surplus computers

Ms. Harris stated per policy, the Business Manager's desktop computer and the office laptop have been replaced. She is requesting authorization to surplus the old computer and laptop. Director Rupp inquired how the items are sold. Ms. Harris stated it is done via a closed bid process. On motion by Director Rupp, seconded by Director Latt, the Board voted 3-0 to surplus the old computer equipment.

J. **REPORTS (from Staff)**

1. **Engineering**

12kV Switchgear Replacement ($730,832 District Match)

Mr. Kaspari stated the Notice to Proceed was signed and the work schedule should be received soon. As the Board is aware, the project bid amount is one million dollars over the grant amount. He has been in contact with CalOES/FEMA and they indicated they have additional project funds

available. Although, the District has to submit a formal application for additional funding. He has not received official notice, but it looks promising.

Lazzar Easement Amendment
Mr. Friedenbach stated Mr. Lazzar agreed to an easement amendment. The District agreed to provide a "comfort letter" once the easement agreement is signed.

Collector Mainline Redundancy Hazard Mitigation Grant ($790,570 District Match)
Mr. Kaspari reported the project was waitlisted by FEMA. Additional information was provided and the project is now progressing forward.

Reservoir Structural Retrofit Hazard Mitigation Grant ($914,250 District Match)
Mr. Kaspari reported that FEMA staff will be looking at the project site in late January and he is hoping For Phase I approval by late spring.

TRF Generator Hazard Mitigation Grant ($460,431 District Match)
The project has been waitlisted since December 2019 and there is no additional news.

2. **Financial**

Ms. Harris provided the December 2019 financial statement & vendor detail report. She stated the District is in the process of moving funds from the County to the new investment accounts as previously authorized by the Board. Director Fuller reviewed the bills and stated all was in order. On motion by Director Rupp, seconded by Director Latt, the Board voted 4-0 to approve the December financial report and vendor statement in the amount of $247,633.84.

3. **Operations**

Mr. Davidsen provided the December Operations Report. Staff conducted the annual EAP call out drill per FERC requirements, as well as the 90-day DOT required inspections on commercial fleet vehicles and trailers. The safety meeting topic was Self Contained Breathing Apparatus. Additional staff training included sexual harassment prevention for staff as well as supervisors. Mr. Davidsen stated he previously made a job offer on the electrical position however, the applicant declined stating he was offered twice the pay by another employer and accepted that position. Mr. Davidsen opted to continue advertising and now has two more interviews lined up for the electrician position.

Ruth Headquarters Remodel
Mr. Friedenbach and Mr. Davidsen discussed the basic repairs needed at Headquarters and provided photos. Mr. Friedenbach stated the improvements are needed however, are not budgeted. Since the District needs to pay prevailing wages for the project, costs could be up to $100,000. Mr. Davidsen stated he met with a local contractor and did a walk thru of the premises. He is hoping to have the estimate soon. Ms. Harris stated funds are available since the TRF Generator project is waitlisted and the Chlorine Scrubber project is not happening. Director Rupp stated the District has not maintained the place so the bills are now due. Director Latt stated there is no need to renovate to a Taj Mahal. Director Fuller stated she appreciates Director Latt's fiscal responsibility, however insulating the outer walls and replacing thirty-year old carpet is a must. President Woo agreed and felt the costs were in line with the basic work to be done. Mr. Davidsen noted that with current permitting standards, new codes must be met which drives up the costs considerably. After additional discussion, on motion by Director Rupp, seconded by Director Fuller, the Board voted 4-0 approve a line item in the budget to improve /upgrade headquarters but with no dollar amount in the budget and directed staff to bring the item back in February for further discussion with a preliminary estimate from the contractor.

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K. **MANAGEMENT**

1. CSDA

Mr. Friedenbach shared the Take Action Briefs. The first one stated the Governor vetoes email retention language. This is good news as the legislation would have required all public agencies to keep all emails for two years which would require additional costly electronic storage hardware and retrieval software. The second brief was regarding concerns over the PGE Public Safety Power Shutoffs (PSPS). He noted the District will be incorporating more safeguards for outages. He also stated that he checked with the Air Quality District and confirmed that during a PSPS, the District can run the Essex generator as needed since it is considered an emergency for our generator air quality permit.

2. California Website Compliance Checklist

SB 929 requires all independent special districts to maintain a website, unless the district passes a resolution claiming a hardship for a specific reason, including evidence of the hardship in a public meeting each year. Mr. Friedenbach shared a California Website Compliance Checklist and stated the District is compliant with State and Federal requirements. He brought the District website up on the screen and showed the Board the locations of all the required information so they could see the District was in compliance.

L. **DIRECTOR REPORTS & DISCUSSION**

1. **General -comments or reports from Directors**

No comments were received.

2. **ACWA**

Director Rupp stated he would be attending the Region 1 kick-off meeting on January 13th. He will attend the remaining Region 1 meetings via phone.

3. **ACWA – JPIA**

Director Rupp stated he will be attending an Executive Committee meeting on January 22nd.

4. **Organizations on which HBMWD Serves: RCEA, RREDC**

President Woo stated the Humboldt County Board of Supervisors voted down the Terra-Gen project and the following day was the RCEA meeting. The room was still packed with people on either side of the issue. RCEA will still buy renewable energy, it just won't be locally now. New officers will be selected at the meeting next month.

Director Latt stated there was no RREDC meeting in December due to lack of a quorum.

ADJOURNMENT

The meeting adjourned at 2:36 pm.

Attest:

Sheri Woo, President

J. Bruce Rupp, Secretary/Treasurer

CONSENT

Arcata considers putting fluoridation on November ballot

The Arcata City Council at its Wednesday meeting is expected to vote on whether to include a measure on the November 2020 ballot that would remove fluoride from the city's drinking water.

By SONIA WARAICH | swaraich@times-standard.com |
February 3, 2020 at 5:07 pm

Arcata is returning to a question it asked 14 years ago: Should the city fluoridate its water?

The Arcata City Council will be voting Wednesday on whether there should be a measure on the November 2020 ballot asking residents whether or not the city should stop fluoridating its water. The item was brought forward at the request of Arcata City Councilman Paul Pitino. A measure previously appeared before voters in 2006 when almost two-thirds of Arcata citizens voted it down, but Pitino said now, "we know a little bit more."

"People weren't even talking about vaccines in 2006," Pitino said.

State law requires any public water system with more than 10,000 service connections to fluoridate their water, but Pitino said Arcata has closer to 6,000.

The No. 1 reason people say fluoridating the drinking water is necessary is to prevent cavities in kids, Pitino said.

"That's the biggest argument," Pitino said. "Except in order for that to work, the kid's got to drink a lot of water and you go, 'Well, couldn't you do it a better way?'"

But Laura McEwen, Health and Human Services program services coordinator, said "community water fluoridation has a 70-year history of being both safe and effective" and "dental disease is the most common chronic childhood disease."

Nine years of data show about 30% of incoming kindergarteners at Arcata Elementary School have untreated tooth decay, which is "pretty good," McEwan said.

"The average for the county is 25%," McEwan said. "And when we start looking at other districts that don't have fluoride, some of them are as high as 51%."

Applying fluoride topically is a more effective way of preventing cavities than ingesting it, according to the article "The Fluoride Debate: The Pros and Cons of Fluoridation" published in the academic journal Preventative Nutrition and Food Science in

September 2018. While topical fluoride in the form of toothpaste and mouthwash is effective, the article stated these methods aren't universally affordable.

On the other hand, McEwen said fluoridating the water is "equitable so everyone who drinks the water gets the benefit."

The U.S. Center for Disease Control and Prevention ranked water fluoridation as one of the top 10 public health achievements of the 20th century.

"Fluoridation safely and inexpensively benefits both children and adults by effectively preventing tooth decay, regardless of socioeconomic status or access to care," the CDC website states. "Fluoridation has played an important role in the reductions in tooth decay (40%-70% in children) and of tooth loss in adults (40%-60%)."

Howard Pollick, faculty at the University of California, San Francisco and chair of the state's fluoridation advisory committee, said he's always looking for the latest research on fluoridation and the bottom line is that it's safe and effective.

There has been some research coming out of Canada and Mexico looking for an association between fluoride exposure and intelligence in children, but Pollick said, "there's certainly no consensus of opinion based on this research."

The U.S. Environmental Protection Agency set the maximum allowable concentration of fluoride in drinking water at four parts per million, but the recommended level for water fluoridation is 0.7 parts per million, Pollick said.

"That's less than a half or a quarter of what's recommended for the maximum amount," he said. " ... Everything that we're exposed to in our environment can be potentially problematic, but everything is dose-related that's what the research confirms."

There's no real clear or convincing evidence or data that points to people experiencing problems when exposed to levels below 1.5 parts per million, Pollick said.

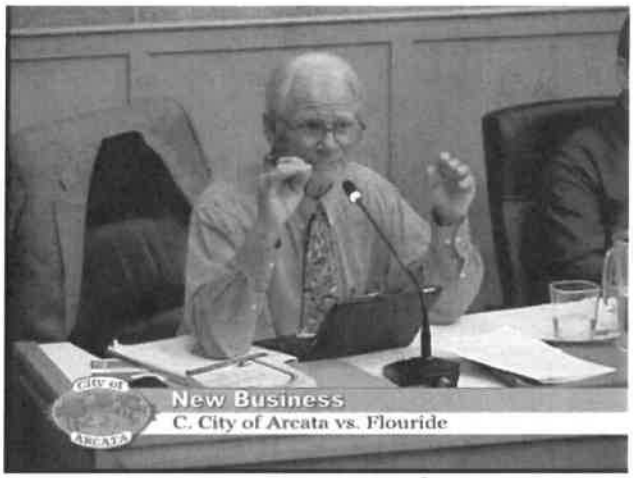
However, Pitino said European countries, which "are usually way ahead of us," have either eliminated or never started fluoridating their water "because they were so afraid of it."

"So you start saying, huh, maybe it's not safe," Pitino said.

Sonia Waraich can be reached at 707-441-0506.

Arcata's fluoride talk draws contentious discussion, falls flat

Without a second, item won't go to ballot



Arcata Councilman Paul Pitino sought to have the voters decide on fluoridation of city water, but the motion fell flat with no seconds from fellow councilmembers.
(Ruth Schneider — The Times-Standard)

By **RUTH SCHNEIDER** | rschneider@times-standard.com | Eureka Times-Standard
PUBLISHED: February 5, 2020 at 9:12 pm | UPDATED: February 5, 2020 at 9:13 pm

The Arcata City Council took up the issue of water fluoridation on Wednesday evening, considering whether to add a ballot measure in November 2020 asking voters' opinion on the issue. The council, after hearing comments from a wide swath of Humboldt County residents, never actually voted because there was no second on the motion.

The issue was brought forward by Councilmember Paul Pitino, who talked at length about what he has learned about the issue since the city last voted on the issue in 2006. At one point late in the meeting, he tried to remove fluoride through a council motion but he did not receive a second on the motion and returned to seeking it as a ballot measure. There was no second on that motion either and it died.

Mayor Michael Winkler expressed support for the ballot measure early in the meeting but declined to second in his role as mayor.

"The U.S. stands out as being somebody that fluoridates most of our water systems," Pitino said Wednesday night. "Just because we do it, doesn't mean its right. … Adding fluoride to our water system is dubious. And the first rule is do no harm."

He pointed to studies that backed up his perspective and cited potential ill effects of neurotoxins.

"Fluoride is a problem because of its neurotoxicity," he said. "They are not saying it doesn't help kids get their teeth. … They're saying that it lowers IQ in children. There are studies. They are valid studies."

"When you look at all the studies, you say, 'uh-oh.' In my mind, I would not fluoridate," he added.

Providing background, City Manager Karen Diemer said the city began fluoridating water in 1956.

The city also took costs into consideration.

Arcata currently spends about $16,500 on fluoridation materials, supplies and contract lab costs and an additional $19,500 on staff time. It is estimated it would cost less than $5,000 to add the measure to the ballot.

The public was mixed on the issue, even among those who identified as medical professionals. One self-identified dentist said he invited researchers from UC San Francisco who could talk about the "real science."

In contrast, a woman who identified as a nurse said she was concerned about fluoride.

"Fluoride is a drug. It is classified as a drug," she said. "That means it is toxic. ... This might be causing irreparable damage to our children."

Kelsey Reedy, an Arcata resident, also cited concerns about fluoride.

"This is something I had an issue with since I moved here 10 years ago," she told the council. "I get the concern of children's dental health but giving consensual medication is not the answer."

Public health officials also spoke out during public comment, noting the benefits fluoride has on reducing dental issues in young children.

Data show about 30% of incoming kindergarteners in Arcata schools have untreated tooth decay, said Laura McEwen, a Humboldt County Department of Health and Human Services program services coordinator. She said students from areas without fluoride have levels of decay as high as "nearly 60%."

Several comments raised concerns the City Council was promoting an angle and items on the ballot should be brought forward by voters rather than councilmembers. City attorney Nancy Diamond affirmed the council had the authority to put a measure on the ballot.

Robert Berg, a Eureka-based dentist said he "would like to see the fluoride remain in the water," because it is helpful to low-income families.

Connie Stewart, the executive director of the California Center for Rural Policy, called fluoride "an equity issue" because not everybody can afford to go to the dentist. And she added it was only an issue because the city has fewer than 10,000 connections.

State law mandates areas servicing "water systems with 10,000 or more service connections to fluoridate their water supply," according to the staff report. Arcata has about 6,000 connections.

Both councilmembers Brett Watson and Sofia Pereira suggested voters take up the measure if they want to see it on the ballot, but both noted Arcata voters rejected it 14 years ago.

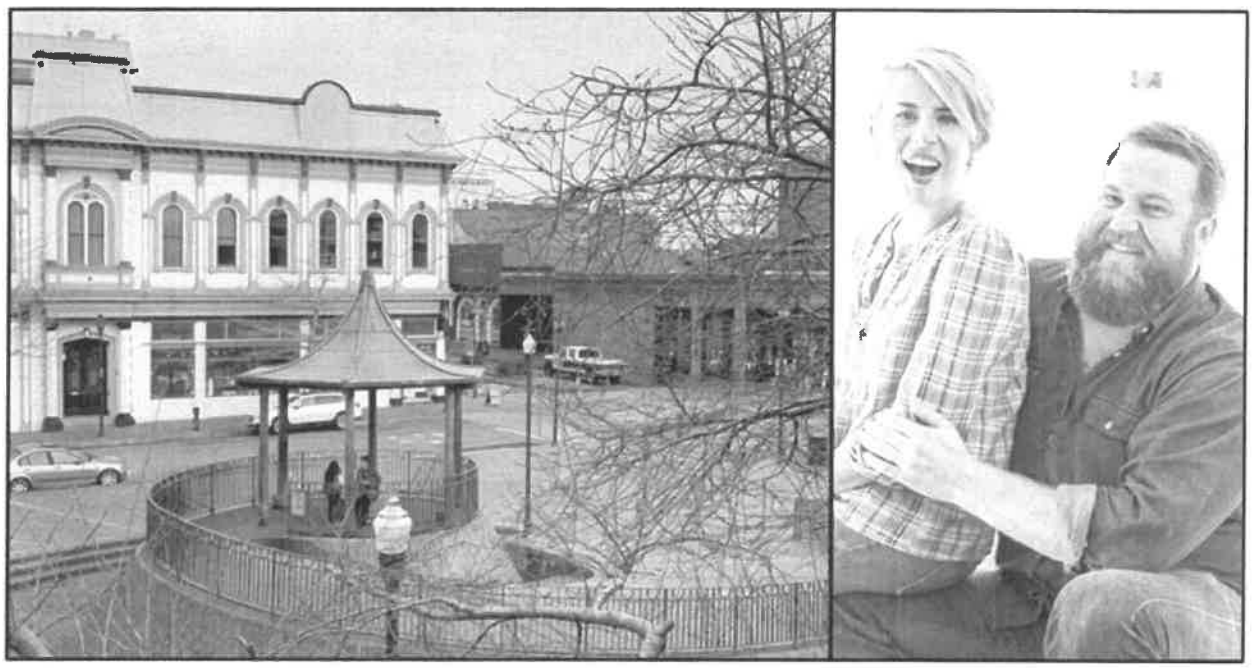
"This was voted on by the voters.," Pereira said. "It was voted overwhelmingly down."

Watson said it would require signatures from 10% of Arcata's registered voters to get an item on the ballot.

Ruth Schneider can be reached at 707-441-0520.

LoCO Staff / 01/21/2020 @ 2:49 p.m. / Community

HELP US, HGTV! City of Eureka to Apply for Reality TV Show Makeover



Can HGTV's Ben and Erin Napier make Eureka shiny? Tune in next year, maybe!

City of Eureka press release:

Today, the City of Eureka has announced that they will be submitting an application for HGTV's new show, "Home Town Takeover," slated to air in 2021. The popular HGTV television show, "Home Town," highlights Ben and Erin Napier's work restoring historic houses. The show's recently announced spinoff mini series "Home Town Takeover" takes the Napier's efforts to the next level - tackling improvements at multiple sites across a small town over the course of 6 episode special series.

HGTV and the Napiers are requesting applications from communities with less than 40,000 residents that are unique, have a passionate local community, and historic buildings and architecture that are in need of renovation and restoration.

"Eureka has these attributes in spades," said Eureka's new City Manager, Dean Lotter. "The breathtaking Victorian architecture, Eureka's historic waterfront, and engaged citizenry make Eureka the perfect candidate for the show."

While parts of Eureka's Old Town and Downtown have experienced facelifts over the past few years, there are still buildings and homes around the community that could use focused restoration efforts. "We have a variety of different types of building - old businesses, historic old homes, and governmental buildings - that could really use some extra love and attention," said Eureka's Community Services Director Miles Slattery. "While we've made great strides improving Eureka's business districts, there is still work to be done."

To apply, the City will submit a video that showcases the homes, businesses, and public areas that are in need of a makeover, as well take viewers on a tour of the city that features the residents and business owners who love Eureka.

"This is a great opportunity to bring national attention to our community, to prioritize the restoration projects that are most important for improving our local aesthetics, and to share some optimism and excitement as we collectively envision our future," Eureka City Mayor Susan Seaman said.

Councilmember Leslie Castellano added, "I'm really excited about Eureka's potential as a candidate for this project. It's a fun opportunity that could provide some real local benefit. Why wouldn't we throw our hat in the ring?"

If you're interested in participating in the process, or have footage of Eureka that you're willing to share for this effort, the City of Eureka is asking anyone interested in supporting a coordinated application development effort to contact Emily Kirsch via email (e.kirsch@eddyalexander.com) by the end of business on Friday, January 24, 2020.

SAMOA SOFTBALL

TUESDAY, JANUARY 07, 2020

Future home of Murphy's Market and Samoa to grow by 150 by November 2020.

This will be the future home to Murphy's Market in the next few years in Samoa. There will also be a gas station according to town owner Dan Johnson in his latest update to about 30 residents.

This year 2020 there will be the Phase one opening of a new affordable housing complex on Vance ave. This will include a new secondary sewage treatment plant that will be hooked to the Old Pulp Mill Outfall line. Then all houses on on Vance avenue will be hooked up to new sewage and electrical lines from the new apartments to the Samoa Gym. This should be finished by November. (The softball field will get new lights, but not until phase 6 down the road.) Then the Houses (Including my Brown one below) on Rideout St. and Sunset Ave. will also have new utilities. The 60 houses should be put up for sale, but not before they are upgraded to be able to garner home loans.

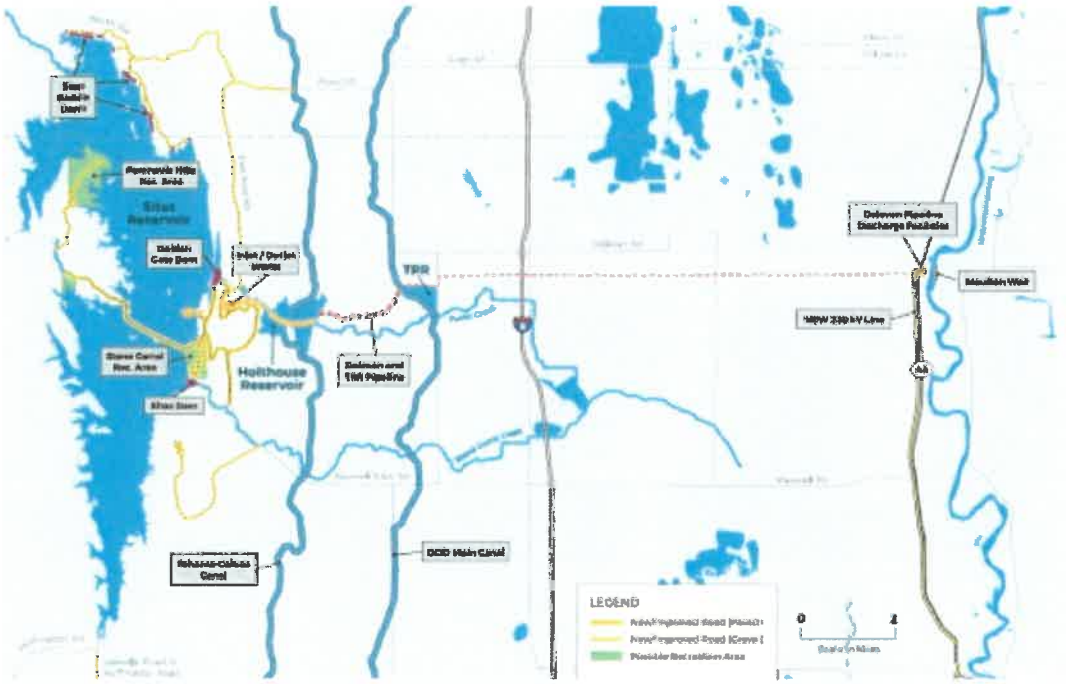
The new Community Service District will start their formation and start collecting revenues in about a year and half and be functional on their own in 3 years.

The next phases of new construction should take the town to over 1,000 residents in about 4 years.

New plots of property should be available to check out in about 6 months. The timeline for the town of Samoa is going to move quickly now.

Sites Reservoir proposal receives $6M in federal funds

Part of year-end spending package



The proposed Sites Reservoir would be near Maxwell. COURTESY

By WOODLAND DAILY DEMOCRAT |

PUBLISHED: January 8, 2020 at 11:28 am | UPDATED: January 8, 2020 at 2:45 pm

Sacramento — Sites Reservoir will receive $6 million from the federal government as part of a bipartisan spending bill that was signed by President Trump at the close of 2019.

The funding, authorized by the WIIN Act, was appropriated to the Bureau of Reclamation to advance Sites Reservoir. With the passage of this legislation, Congress has now appropriated roughly $10 million in WIIN Act funding to the Bureau of Reclamation for Sites Reservoir.

Area Congressman John Garamendi in response to the legislation that provides more money also commended Gov. Gavin Newsom's inclusion of the Sites Reservoir Project in his 2020 Water Resilience Portfolio.

"Building Sites Reservoir, an off-stream reservoir, would bring California closer to achieving a drought-resilient water system," Garamendi stated. "Our state needs to make forward-looking investments to meet its future water supply needs, and Sites will benefit farmers, our communities, and the environment."

"The success of Sites Reservoir depends on continued support from our partners, including the federal government," said Fritz Durst, chairman of the Sites Project Authority. "We are grateful to our California Representatives and Senators who worked tirelessly to ensure Sites was included in the spending bill. Additionally, we truly appreciate that the Department of Interior requested this funding from Congress."

Located 10 miles west of the town of Maxwell in rural Glenn and Colusa counties, Sites Reservoir would be an off-stream storage facility that captures and stores stormwater flows in the Sacramento River — after all other water rights and regulatory requirements are met — for release in dry and critical years for environmental use and for California communities, farms and businesses when it is so desperately needed.

Sites Reservoir will provide federal and state resource agencies with a dedicated and reliable supply of water they can manage to provide environmental benefits, especially during drier years. Up to half of the project's annual water supplies will be provided for environmental flows, which will help to improve conditions for Delta smelt; help preserve cold-water pools in Shasta later into the summer months to support salmon development, spawning and rearing; and improve the Pacific Flyway habitat for migratory birds and other native species.

"I'm happy to have helped secure additional federal commitments for Sites Reservoir. This $6 million represent a continuous push from the Federal Government to actually build this project," said Congressman LaMalfa. "Sites is the best opportunity we have to increase water storage in California. Dry years or wet- for habitat, farms and Northern California communities this project brings water security and benefits. I'll keep fighting to get this project built."

AP NEWS

California governor proposes new plan for managing water

By ADAM BEAM 02/05/2020

SACRAMENTO, Calif. (AP) — California's governor revealed a plan on Tuesday that would keep more water in the fragile San Joaquin River Delta while restoring 60,000 acres of habitat for endangered species and generating more than $5 billion in new funding for environmental improvements.

The framework announced Tuesday by Gov. Gavin Newsom is a unique approach to managing the state's scarce water resources. Historically, California has governed water usage by issuing rules — rules that are often challenged in court by farmers or environmental groups.

Those lawsuits can drag on for years and prevent programs designed to boost sagging salmon populations and other threatened species that live in the delta.

Instead of issuing new rules, for the past year the Newsom administration has been negotiating with water agencies to come up with "voluntary agreements" between the two sides with "partnership and oversight from environmental groups."

"Today, my Administration is proposing a path forward, one that will move past the old water binaries and set us up for a secure and prosperous water future," Newsom wrote in an op-ed announcing the framework.

But some environmental groups were skeptical. Last year, the Trump administration announced new rules that would take more water out of the delta. The Newsom administration said it would sue the federal government over those rules, but so far it has not done so.

Also, John McManus, president of the Golden State Salmon Association said, the framework did not address temperature controls for the river at the time of year when salmon need cold water to survive.

"There are definitely worrisome signals coming from today's announcement," McManus said,

Wade Crowfoot, secretary for the California Natural Resources Agency, said the state is still negotiating with the federal government and can still file a lawsuit if their concerns are not addressed. He stressed the goal is to continue working with federal agencies to resolve the issue.

The agreements would be in place for the next 15 years. But they are not finished yet. Both sides still have to finish policy and legal issues. Plus, the State Water board must conduct a third-party scientific review.

"This is a promising step that will result in additional water for the environment,"said Jeffrey Kightlinger, general manager of the Metropolitan Water District of Southern California. "A shared, voluntary approach to balancing the beneficial uses of water from the Sierra is far better for California's people and environment than years of litigation."

Water in the delta comes from snowmelt in the Sierra Nevada mountains and provides drinking water for millions of people as well as irrigation for farmers throughout the state.

The framework would increase the amount of water flowing through the delta by up to 900,000 acre feet in years when conditions are dry, below normal or above normal. One acre foot of water (43,560 cubic feet) is more than 325,000 gallons, the amount of irrigation water that would cover one acre to a depth of one foot.

Additional flows would be less during wet years.

More water means a better environment for the state's endangered salmon population, whose numbers have reached dangerously low levels. The framework would also restore more than 60,000 acres of habitat for some of the delta's species by strategically letting rivers flow through their natural flood plain to create wetlands.

The idea, according to California Department of Fish and Wildlife Director Chuck Bonham, is for the wetlands to attract more bugs, which the salmon will eat and grow larger, making it more likely they will return to breed.

"I am committing to achieving a doubling of California's salmon population by 2050," Newsom wrote. "These agreements will be foundational to meeting that goal."

Tom Birmingham, general manager of the Westlands Water District, said previous water rules have focused strictly on providing more water for fish.

"Unless we address all of the factors that limit the abundance of those species, we're never going to be successful," he said.

USEPA Announces Major Actions to Address PFAS; California Water Utility Files Landmark PFAS Lawsuit in Federal District Court

Environmental Law
January 23, 2020

The United States Environmental Protection Agency (USEPA) recently announced two major developments regarding the agency's efforts to address and regulate per- and polyfluoroalkyl substances (PFAS). As part of USEPA's PFAS Action Plan, USEPA unveiled interim guidance to address PFAS contamination in groundwater, as well as a new validated method for testing PFAS in drinking water. Both agency actions will influence efforts to address PFAS on the state-level, especially in relation to PFAS clean-up efforts and setting PFAS screening levels. Moreover, these recent efforts to establish PFAS screening and clean-up levels will further lead to potential enforcement actions, as well as other litigation related to PFAS contamination. Indeed, a new action filed this week against the federal government for PFAS water treatment costs might be the beginning of a wave of PFAS actions to hit California.

As we previously reported, last year USEPA revealed its formal "Action Plan" to implement a host of both short and long term efforts to address the widespread concern over PFAS contamination. In December, USEPA checked off two items from its Action Plan for PFAS.

On December 20, 2019, USEPA issued interim guidance to address PFAS contamination in groundwater that may be current or potential sources of drinking water. The guidance is intended to be used under federal cleanup programs, meaning clean-ups under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and corrective action under the Resource Conservation and Recovery Act (RCRA). USEPA's guidance recommends using a screening level of 40 parts per trillion (ppt) to determine if perfluorooctanoic acid (PFOA) and/or perfluorooctane sulfonic acid (PFOS)—the two most common PFAS compounds—are present at a site that may warrant further attention. In addition, USEPA recommends using the drinking water health advisory level of 70 ppt as the preliminary remediation goal (PRG) for contaminated groundwater where no state or tribal maximum contaminant level (MCL), or other applicable standard exists.

However, many states have already adopted clean-up levels significantly lower than USEPA's interim guidance. For example, the California State Water Resources Control Board's (State Water Board) current recommended single health advisory level is 70 ppt, but as we previously noted, the State Water Board will likely update this level later this year. In addition, the State Water Board's PFOS drinking water notification level is 6.5 ppt, and the PFOA notification level is 5.1 ppt, which are both significantly lower than the levels set by USEPA in its interim guidance. Accordingly, at least with respect to California, the State Water Board's standards will likely continue to drive clean-up requirements. In contrast, states that have already adopted higher screening levels and remediation goals than USEPA may now be influenced to lower those standards based on USEPA's standards.

On December 19, 2019, USEPA unveiled a new validated method for testing PFAS in drinking water. The new test method known as Method 533 focuses on "short chain" PFAS, which are PFAS compounds with carbon chain lengths of four to 12. Method 533 also complements USEPA Method 537.1, and can be used to test for 11 additional PFAS compounds in drinking

water. For years, validated test methods for PFAS have been very limited (and expensive to conduct), but with scientific advancement and an increased understanding for how PFAS interact and breakdown in the environment, new test methods are becoming more readily available. These new test methods make it possible to test for additional PFAS compounds, potentially increasing the number of PFAS compounds that will need to be regulated by USEPA and states.

Finally, on January 21, 2020, California-American Water Company filed a lawsuit against the federal government for costs related to a water treatment system installed to clean-up a well allegedly contaminated with PFOA and PFOS from the use of fire retardant foam containing PFAS at the former Mather Air Force Base near Rancho Cordova. According to the complaint that was filed in the United States District Court for the Eastern District of California, one of the plaintiff's drinking water supply wells was contaminated as a result of either the leaching of PFOA and PFOS into groundwater at the base and migration of those compounds to the well, and/or the government's practice of reinjecting contaminated groundwater after treating the water for other pollutants. The plaintiff seeks damages of over $1.3 million. To our knowledge, this is one of the first actions filed in the State of California seeking to recoup PFAS clean-up costs, and may be an early sign of a new wave of PFAS litigation throughout California.

THE ROLE OF ESTUARIES

By Dr. Sandra Jacobson,
CalTrout South Coast Regional Director

What are Estuaries?

Estuaries are areas where the rivers meet the ocean and are ecologically important to fish and wildlife species because of the rich feeding and nursery habitats they offer. They're also an important transition area and gateway for aquatic species that migrate between freshwater rivers and the ocean.

When estuaries are degraded by urban impacts such as water pollution, coastal development, and dams – habitat quality declines for native species, while harmful algal blooms and invasive species take hold. Algal blooms can cause sharp decreases in dissolved oxygen levels in the water, to which salmonids are particularly sensitive. The cumulative impact of these habitat issues in estuaries can decimate sensitive species such as steelhead over time.

Salmonids are among the aquatic species most sensitive to high water temperature and poor water quality. They migrate between freshwater and the ocean several times in their live cycle, and use estuaries as the gateway between these two very different environments. Due to their wide-ranging use of different parts of watersheds, they make excellent indicators of overall watershed health and function.

Current research shows 11 of the remaining 21 anadromous salmonids in California are at critical risk of extinction in the next 50 years under present trends. Estuaries are especially important to the survival of juvenile salmonids given their important role, helping to increase the number of adult salmonids that survive to adulthood and return to spawn.

The abundant food sources in estuaries allow them to grow rapidly and given them selective advantage when they enter the ocean. Estuaries are the last stop and therefore the last chance they have to grow before they make the arduous journey into the ocean.

What are the Current Conditions of Estuaries?

Currently, many estuaries have become dramatically reduced in size and quality due to development and watershed modifications.. Some estuaries in the southern coast have particular issues with eutrophication, where water that flows into these receiving waters contains phosphorus and nitrogen from agriculture and urban sources, which feed algal blooms in the lower receiving waters.

These can alter the habitat and water quality, and therefore alter the food web for many aquatic species that use estuaries as an important part of their life cycle.

CalTrout's **Restore Estuaries** Key Initiative seeks to nurture the productive and vital land-sea interface to restore function of these critical feeding and nursery habitats.
Restoring function to once-productive but now highly-altered habitats will greatly improve rearing conditions for juvenile salmonids, increasing the likelihood of survival at sea and adults returning to their natal tributaries. And in the face of climate change, this will increase ecological resiliency of our coast to buffer sea level rise.

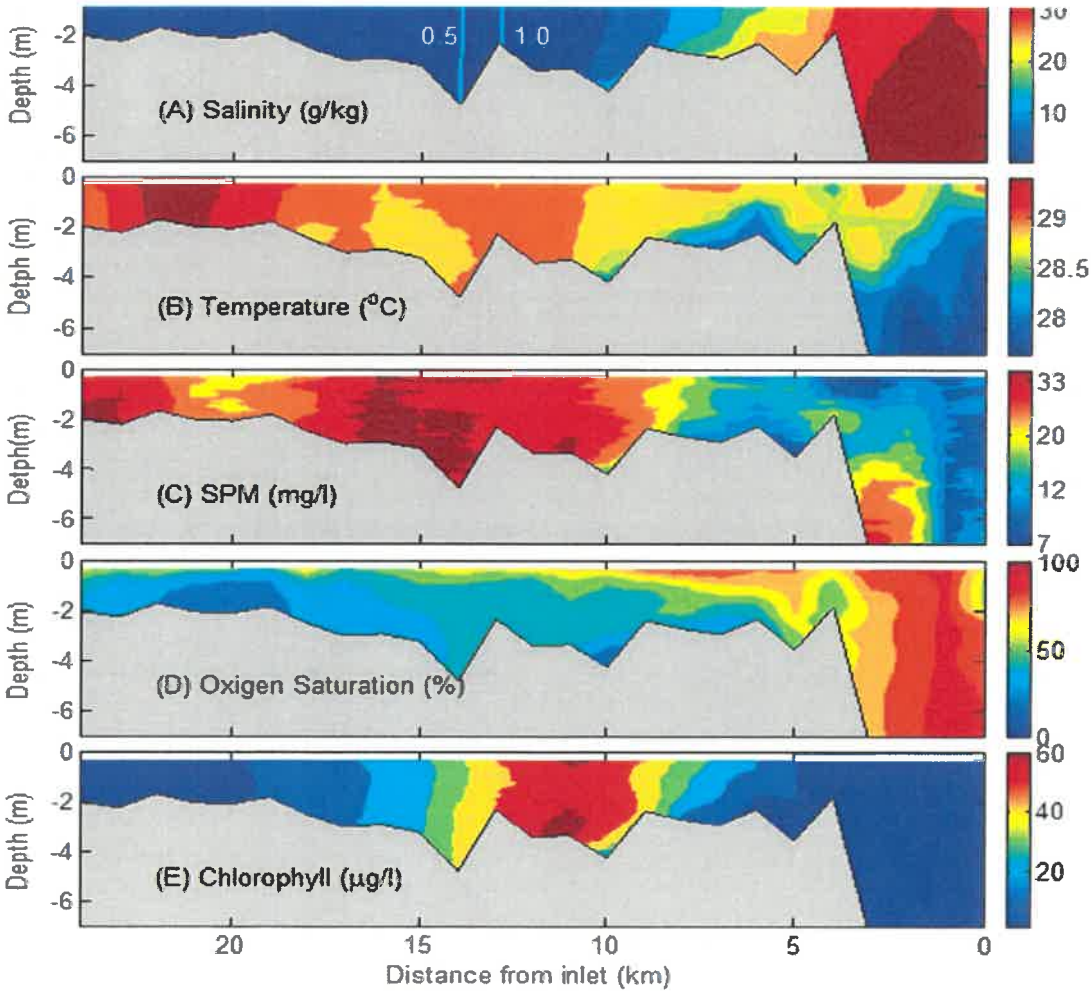
The Aquatic Species Assessment Tool (ASAT)

As part of the Restore Estuaries initiative, CalTrout is developing a new estuary assessment and management tool in order to better understand and protect ecologically sensitive aquatic species such as endangered salmonids. The overarching goal is to enhance biodiversity in California's estuaries and build ecosystem resilience to protect them from the effects of climate change and sea level rise.

The Aquatic Species Assessment Tool (ASAT) will use ecological inputs to predict the impact of management actions on aquatic species communities. Inputs include water quality, habitat and food web complexity, and sensitive species' seasonal usage such as salmon and steelhead, tidewater goby and Pacific lamprey. Results from the tool can be used to predict responses of aquatic species to changes in their environment from a holistic standpoint. The ASAT will provide a user-friendly tool for resource managers, regulatory agencies, and restoration practitioners to inform decisions in a multi-species context about estuary restoration and management actions.

ASAT is being developed to provide a comprehensive framework for resilient and functional estuaries that support multiple threatened and endangered aquatic species.

This approach yields a trade-off analysis based on species' physiological requirements to predict growth and viability impacts to various species in response to estuary management actions such as artificial breaching of sand berms, and permitting of housing developments and transportation corridors. The new information that ASAT provides will better inform our future conservation efforts.



Tracking fish in Pescadero's Estuary

CalTrout's work to restore estuaries includes a project partnership with the California Department of Fish & Wildlife (CDFW), California Trout, Trout Unlimited, and NOAA Southwest Fisheries Science Center to track tagged fish moving in Pescadero Creek.

A Passive Integrated Transponder (PIT) tag is a common, non-lethal way to track and uniquely identify individual fish that has been used effectively to monitor and research salmonid populations in the U.S. for decades. A PIT tag is a small, electronic microchip about the size of a grain of rice that is encased in glass and does not reduce fish survival.

Each tag has a unique 16-digit code that can be read using a handheld or other scanner that creates an electromagnetic field, which allows the tag to transmit its unique identification number when triggered by the nearby scanner. The tag remains dormant until the fish comes close enough to the electromagnetic field to become activated and transmit the number for recording. This pilot study seeks to extract more information from fish that have already been tagged by CDFW for their mark-recapture study and will add value to existing operations.

The PIT tag antennae to be used in this pilot are made up of simple wires hooked up to batteries that generate the electromagnetic field necessary to detect fish swimming past the wires in the stream. This system is hooked up to a reader that records the individual tag codes and time of day automatically and stores it for future use on a small computer.

The reasons a PIT tag antennae array was chosen for this pilot study in Pescadero Creek is because they are highly reliable in small stream settings, very efficient in detecting passing fish in the stream in a more cost-effective and less invasive manner than physically recapturing the fish, and their accuracy in reading tags is virtually 100%. A diagram of the PIT tag antennae array setup for this site is shown to the right.

PIT tag antennae control set up.

PIT tag antennae array set up.

How does it work: As tagged steelhead swim through the cable loop, the signal and PIT tag code is automatically sent and recorded on a device attached to the batteries on the bank. With two sets of cables, we can tell if fish are moving upstream or down.

Why are we doing this? CDFW tags several hundred Pescadero steelhead with PIT tags in the Marsh each year. We are supporting their work by tracking steelhead to help understand when the adults migrate upstream to spawn, when the young migrate downstream to the Marsh and Pacific Ocean, what the survival rates of steelhead are, and what the population size is.

Poway Might Reimburse Residents, Businesses For Week Of Water Restrictions

Monday, February 3, 2020

By **Matt Hoffman**

The **Poway City Council** will vote Tuesday on whether to issue rebates on water bills to compensate residents and business for losses stemming from the contamination crisis late last year.

In late November, stormwater contaminated the city's water supply and people were told not to drink water for nearly a week. Now the city is looking to reimburse residents and businesses for the interruption.

The city council will consider giving customers a one time credit that on average would be $28, depending on water usage.

"My initial reaction was that's a very small credit," said Poway resident Michelle Meeks. "Considering six days having to boil water every single day ... that's every time you cook, you clean ... you take a bath, you brush your teeth. You're extremely inconvenienced."
Other Poway residents were glad to see the city stepping up.

"I guess that's nice," Kathy Geary said. "I think it's a lot of money that the city has to pay but some people could probably use it."

Joseph Scott called the rebate "a drop in the bucket, but it is an effort that shows the city is looking to help people."

While officials were telling residents not to drink the water, nearly 200 stores and restaurants were forced to close for nearly a week.

"I felt more sorry for the restaurants because that's their livelihood and all the restaurant were closed in Poway," Geary said.

It is likely that restaurants use more water than the average home, meaning their water credit would likely be higher — but some say it will not be enough to cover losses.
"For a business like me I would imagine it's in the $100 range for our water usage — our losses are $25,000 so it's insignificant in the scheme of things," Players Sports Grill owner Michael Pasulka said.

Pasulka paid his employees while his restaurant was closed during the water crisis. "The community has been great they've come in and continually ask whether we're recovering from it," he said.

Pasulka paid his employees while his restaurant was closed and plans to file a claim with the city for lost income.

Tuesday's City Council meeting starts at 7 p.m.

CORRESPONDENCE

SECTION G1, PAGE NO. 1

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET, PO BOX 95 • EUREKA, CALIFORNIA 95502-0095
OFFICE 707-443-5018 ESSEX 707-822-2918
FAX 707-443-5731 707-822-8245
EMAIL OFFICE@HBMWD.COM
Website: www.hbmwd.com

January 29, 2020

Trinity County Building Department
61 Airport Road
Weaverville, CA 96093

Re: Vivid Green, LLC
APN 020-100-35-00 and 020-490-04-00

Gentlemen:

I am writing on behalf of our District to communicate our authorization for Vivid Green, LLC to continue with their construction, as permitted by your department, on the above referenced parcel owned by the Humboldt Bay Municipal Water District.

We have entered into a lease agreement, a copy of which is attached, which authorizes the continuation of their construction on a portion of our parcel 020-100-35-00.

Kindly refer specifically to Section 12 subparagraph (f) wherein our District authorizes Vivid Green, LLC to continue with their development of the portion of our District's property which is the subject of a lot line adjustment application that is currently on file with your office.

If you have any questions, or need any additional information, do not hesitate to contact us.

Respectfully,

John Friedenbach,
General Manager

Cc: Vivid Green, LLC
Ryan Plotz. Esq.
Dustin Owens, Esq.

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET, PO BOX 95 • EUREKA, CALIFORNIA 95502-0095
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EMAIL OFFICE@HBMWD.COM
Website: www.hbmwd.com

January 31, 2020

Mark Andre, City of Arcata
Mandy Mager, City of Blue Lake
Brian Gerving, City of Eureka
Rick Hanger, Fieldbrook-Glendale CSD
Tim Latham, Humboldt CSD
Chris Drop, Manila CSD
Greg Orsini, McKinleyville CSD

Dear Municipal Customers:

The purpose of this letter is to transmit information about your domestic water use per the requirements of our Ordinance 16 contracts. The following documents are attached:

- Domestic Water Use Report for CY2019 – Presents total water use and the corresponding Average Daily Water Use for each municipality.
- Moving Five-Year Average Water Use Report for CY2019 – Presents total water use and the corresponding Moving Five-Year Average Water Use for each municipality. It will be used to allocate HBMWD's Drinking Water Treatment Facility costs for fiscal year 2020-21.
- Peak Rate Allocation by Municipality for CY2019 – Presents maximum daily water use by month for each municipality. The contract peak rates will continue to be used to allocate HBMWD's Base Water Facility costs for fiscal year 2020-21.

Information on daily water use has been sent with monthly billing statements on an ongoing basis.

Sincerely,

John Friedenbach
General Manager

Domestic Water Use for CY2019 (millions of gallons)									
Month	Arcata	Blue Lake	Eureka	Fieldbrook	HBMWD	HCSD	Manila	McK CSD	Total
Jan-19	46.213	5.268	110.770	3.546	22.088	25.812	2.430	39.762	255.889
Feb-19	44.185	4.806	96.900	2.935	14.748	22.753	2.091	34.605	223.023
Mar-19	44.543	4.95	98.300	3.069	11.964	22.522	2.251	35.279	222.878
Apr-19	50.649	5.552	107.080	4.363	13.456	24.416	2.892	39.83	248.238
May-19	49.921	5.999	103.090	5.01	13.991	25.481	2.879	41.572	247.943
Jun-19	46.998	6.091	106.050	6.169	14.454	26.305	2.989	44.075	253.131
Jul-19	62.762	8.162	142.058	7.911	14.835	35.082	3.946	56.916	331.672
Aug-19	59.885	6.981	129.803	6.748	18.325	33.124	3.906	52.252	311.024
Sep-19	59.794	6.236	129.360	5.853	20.537	31.101	4.071	49.222	306.174
Oct-19	51.793	5.331	116.770	4.686	20.204	28.025	2.974	40.810	270.593
Nov-19	45.593	4.415	102.040	3.863	16.578	27.567	2.630	34.012	236.698
Dec-19	52.500	5.484	107.460	4.530	15.006	33.365	2.858	43.080	264.283
Total Annual Use	614.836	69.275	1349.681	58.683	196.186	335.553	35.917	511.415	3171.546
Monthly Average Use	51.236	5.773	112.473	4.890	16.349	27.963	2.993	42.618	264.296
Avg Daily Water Use (mgd)	1.689	0.190	3.708	0.161	0.539	0.922	0.099	1.405	8.713

Notes:

Manila CSD meter out for calibration/repair January. Water usage for that period is calculated based on the prior year water use.

Average daily water use based on 364 days/year (HBMWD based on 364 days).

SECTION G.2 PAGE NO. 2

Humboldt Bay Municipal Water District
Ordinance 16 - Moving Five-Year Average Water Use - CY 2019

	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	Moving 5-Yr Avg Daily Use	
											MGD	%
# of Days						365	366	363	367	364		
Eureka	1393.00	1382.29	1350.54	1429.23	1349.68	3.82	3.78	3.72	3.89	3.71	3.78	45.481%
Arcata	647.58	656.91	663.07	659.07	614.84	1.77	1.79	1.83	1.80	1.69	1.78	21.352%
Blue Lake	123.58	76.36	70.60	78.28	69.28	0.34	0.21	0.19	0.21	0.19	0.23	2.754%
HCSD	321.41	332.40	324.64	334.22	335.55	0.88	0.91	0.89	0.91	0.92	0.90	10.857%
McK CSD	455.88	507.66	502.56	522.43	511.42	1.25	1.39	1.38	1.42	1.40	1.37	16.467%
FCSD	56.83	57.75	64.52	57.30	58.68	0.16	0.16	0.18	0.16	0.16	0.16	1.944%
Manila CSD	38.60	31.80	31.98	35.50	35.917	0.11	0.09	0.09	0.10	0.10	0.10	1.145%
Total Muni	3036.87	3045.16	3007.90	3116.02	2975.36	8.32	8.32	8.29	8.49	8.17	8.32	100%
HB Retail	201.80	153.81	84.06	141.11	196.19	0.55	0.42	0.23	0.39	0.54	0.43	
Total	3238.68	3198.98	3091.96	3257.13	3171.55	8.87	8.74	8.52	8.88	8.71	8.74	

Notes for 2015 water use:
Manila CSD meter out of service August
Eureka meter out of service May
Average daily water use based on 366 days/year (HBMWD based on 372 days)

Notes for 2016 water use
McKinleyville CSD meter out of service March
Average daily water use based on 366 days/year(HBMWD based on 370 days)

Notes for 2017 water use
Blue Lake meter out of service August
Fieldbrook usage based on Blue Lake meter usage (see note re: Blue Lake meter)
Average daily water use based on 363 days/year (HBMWD daily use based on 363 days)

Notes for 2018 water use
Arcata meter out of service April-May
HCSD meter out of service January-March
Manila CSD meter out of service November-December
Average daily water use based on 367 days/year (HBMWD daily use based on 365 days)

Notes for 2019 water use
Manila CSD meter out of service January
Average daily water use based on 364 days/year (HBMWD daily use based on 364 days)

Humboldt Bay Municipal Water District

Peak Rate Allocation by Municipality

Maximum Daily Use in MGD by Month for the Period January 2019 - December 2023

Month	Eureka	Arcata	McKCSD	Blue Lake	FGCSD	HCSD	Manila CSD			Grand Total
							Manila Town	Sierra Pacific (4)	Total MCSD	
Jan-19	4.301	1.685	1.854	0.268	0.337	0.933	0.085 (2)	0.005	0.090	
Feb-19	4.219	1.747	2.215	0.203	0.152	0.929	0.082	0.003	0.085	
Mar-19	4.244	1.734	1.634	0.196	0.158	0.883	0.087	0.002	0.089	
Apr-19	3.679	1.78	1.661	0.208	0.213	0.883	0.108	**0.007**	0.115	
May-19	4.053	1.788	1.618	**0.549**	0.223	0.891	0.110	0.004	0.114	
Jun-19	5.234	1.938	1.898	0.540	**0.343**	1.172	0.123	0.001	0.124	
Jul-19	5.411	2.102	2.058	0.303	0.310	1.181	0.143	0.001	0.144	
Aug-19	**5.966**	**2.235**	**2.283**	0.296	0.316	**1.485**	0.169	0.004	0.173	
Sep-19	5.134	2.231	2.019	0.265	0.303	1.240	**0.172**	0.004	**0.176**	
Oct-19	4.454	2.141	1.549	0.308	0.271	1.342	0.103	**0.007**	0.110	
Nov-19	5.281	1.829	1.967	0.209	0.232	1.179	0.108	0.005	0.113	
Dec-19	3.779	1.778	1.683	(3)	(3)	1.244	0.132	0.004	0.136	
Peak-2019	**5.966**	**2.235**	**2.283**	**0.549**	**0.343**	**1.485**	**0.172**	**0.007**	**0.176**	
Contract Peak Rate Allocations	**7.0**	**3.0**	**2.6**	**0.4**	**0.43**	**2.9**			**0.15**	

Notes:

(1) Ordinance 16 calls for Peak Rate Allocation (PRA) calculations to be based on calendar years.
Peak Rate Allocation is the maximun number of gallons per calendar day of water to which a customer is entitled by contract.

(2) Due to a meter malfunction or communication problems, daily data was not available for each day this month.

(3) Due to a meter malfunction or communication problems, daily data was not available at all this month.

(4) Maximum daily peaks are not available for all of Manila CSD's water usage.
Sierra Pacific is part of MCSD; however their use is not measured on the mainline meter which serves the Town.
The numbers reflected in the Table for Sierra Pacific represent the Average MGD.

(5) FGCSD and Blue Lake meter's are unique in that Blue Lake's usage is deducted from total usage recorded on FGCSD meter because the Blue Lake meter is downstream from the FGCSD meter. When Blue Lake meter is out for calibration/repair or SCADA signal is out, FGCSD's high daily usage will be disregarded for that period and vice versa.

SECTION G2, PAGE NO. 4

Debra Lake
360 Whitlow Road
Myers Flat CA 95554

January 1, 2020

Dear Fellow Special District Member,

Happy New Year!

I am running as the 2020 incumbent for the Special District seat on Humboldt County LAFCo's Board of Directors. My term ends in June 2020.

I am requesting your vote to remain your Special District member on the Humboldt County LAFCo Board of Directors. Your ballot will arrive by Certified Mail from LAFCo. Keep your eyes out. This is a time sensitive issue.

It has been an honor to have served on Humboldt County LAFCo since 2016. It is a foundation element for proper growth and direction of California.

During my term on Humboldt County LAFCo, I ran for, was elected and served for two years at the state level as a Special District Representative on the CALAFCo Board of Directors in Sacramento. It was the first time Humboldt County has had representation at the state level on CALAFCo's Board of Directors. My term expired in November 2019. I chose to not run for that position again due to my elderly parents' health.

The Cortese–Knox–Hertzberg Local Government Reorganization Act of 2000 is the governing document directing my work with LAFCo.

Please send in your ballot when the time is right. No matter who you decide to vote for, it matters to me that you voted.

Feel free to call me with any questions or concerns at 707-943-3402

Sincerely,

Debra Lake

Debra Lake
Fruitland Ridge Volunteer Fire Protection District Board
Humboldt County Local Agency Formation District Board

ELIGIBILITY DETERMINATION MEMORANDUM
Humboldt Bay Municipal Water District

FEMA-4434-DR-CA **PA ID 023-04A9F-00**

Applicant Type	☐ State Agency ☒ Local Government ☐ Tribe ☐ Private Nonprofit		
Grants Manager: *Only fill out this section if the project is in Grants Manager.*		**EMMIE:** *Only fill out this section if the project worksheet is in EMMIE.*	
Project No.	107110	EMMIE Project Worksheet No.	
Version No.	0	Version No.	
Damage Inventory No.	299085	EMMIE Project Cost	$
		Total Amount Obligated	$
Project Title	Collector #4 Transmission Line and Embankment		
Project Size	☒ Large ☐ Small *(Potentially subject to Net Small Project Overrun appeal)*	Category of Work	F

Issue(s):

Amount at Issue	$300,000.00	Eligibility Issue Type(s)	☐ Applicant Eligibility ☒ Facility Eligibility ☐ Work Eligibility ☐ Cost Eligibility
Amount Denied	$300,000.00		
Issue Keyword(s)	Ineligible Facility, Unimproved Natural Feature		

Project Description:

The Humboldt Bay Municipal Water District (Applicant) owns, operates, and maintains five (5) water collection stations, commonly referred to as "Collectors". These Collectors pump water through transmission pipelines to the Applicant's water treatment facility. Specifically, Collector #4 is situated within the channel of the Mad River, approximately 25 feet from the closer (southern) embankment where the transmission pipeline is oriented to deliver water supply to their water treatment facility. Prior to the event, the river historically flowed between the opposite (northern) embankment and the Collector. Heavy rainfall and flooding changed the course of the Mad River, creating a high velocity flow pattern directly towards the southern embankment adjacent to Collector #4, which resulted in scouring of the natural embankment and erosion of natural river-rock and sediments covering the transmission line and access trail to the Collector. The Applicant stated that "prior to the event this pipeline has never been exposed since being constructed around 1970." In addition to the Collector, an access trail, which had been created by regularly driving over the embankment down to the Collector when maintenance activities are performed at the Collector, was also eroded away along with the embankment.

The Applicant performed emergency protective measures in the immediate aftermath of the incident and covered a portion of the exposed pipeline and embankment with rip-rap to prevent the pipe from being damaged by debris and floodwaters and this emergency work was captured under project 105166. Rock jetties were also constructed up-stream from the pipeline to re-direct the flow away from the embankment and transmission line. During the site inspection, there was no visible damage to the transmission line itself as the pipeline was mostly covered. The Applicant had already implemented the emergency protective measures to eliminate the immediate threat of damage to the pipeline. The Applicant's primary point of contact, present during the site inspection, indicated that they would be performing testing to inspect the pipe for damage but had not observed any system-pressure changes that would indicate pipe damage.

The Applicant is requesting funding to design, engineer and construct a permanent repair to restore the embankment and pipe-cover including mitigation to reinforce and protect the transmission line between the collector and the embankment. The Applicant provided FEMA with copies of plans and specifications for this proposal.

Issue(s):

Is the proposed work to repair and stabilize the embankment and reinforce the water transmission pipeline eligible for Public Assistance (PA) funding?

Applicable Statutes, Regulations, and Policies in Effect as of the Declaration of the Emergency or Disaster:

- The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Pub. L. No. 93-288.

  Section 406 (codified as amended at 42 U.S.C. §5172)

- Title 44 of the Code of Federal Regulations (C.F.R.):

  44 C.F.R. § 206.201

- Other Federal Regulations:

- FEMA Policy:

  Public Assistance Program and Policy Guide, FP 104-009-2, at 14-15, 19, 84, 128 (Apr. 2018)

Analysis:

Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) authorizes FEMA to provide financial assistance to states, local governments and certain nonprofit organizations for the repair, restoration, and replacement of *facilities* damaged or destroyed as a result of a major disaster. FEMA administratively categorizes this work as

"permanent work."[1] FEMA regulations define permanent work as work that must be performed through repairs or replacement to restore an eligible *facility* on the basis of its pre-disaster design and current applicable codes and standards.[2]

A "facility" includes any publicly owned building, works, system, or equipment and *certain improved and maintained natural features*.[3] The access pathway for vehicles to access collector ladder is neither designed nor constructed and is simply a pathway created by driving over the land that leads from the embankment to the river-bed at the collector. The Mad River Embankment and river-bed covering the pipeline is clearly not a building, works, system or piece of equipment. Therefore, to qualify as a facility, a natural feature such as the embankment must have a designed and constructed improvement to its natural characteristics, such as a terraced slope or drainage system, which enhances the function of the unimproved natural feature.[4] Additionally, an applicant must show that it maintained that improvement on a regular schedule to ensure that it performs as designed.[5]

There is no evidence that the scoured embankment, access trail and eroded pipe-cover material along the Mad River had been physically altered prior to the disaster by a "designed and constructed improvement." Therefore, the Mad River embankment and river-bed is not in and of itself an eligible facility. The only exception to the requirement that "a natural features must be improved and maintained to be eligible for permanent work," is if the work is required to restore the "integral ground" that supports a damaged facility.[6] "Integral ground" refers to *natural or improved ground* upon which an eligible facility is located and is essential to support the structural integrity and utility of the facility.[7]

In this case, the site inspector did not observe any disaster-related damage to the transmission pipeline itself or evidence that the portion of the scoured embankment or river-bed is necessary to support the pipeline. Furthermore, the Applicant had already implemented emergency protective measures to protect the pipe and redirect the river-flow away from the pipeline.[8] Therefore, the requested work does not address an eligible facility or integral ground upon which an eligible facility is located.

Eligibility Determination: ☐ Partially Approved ☒ Denied

FEMA has determined that the site for which the Applicant is requesting funding is an unimproved natural feature; neither the embankment, nor the river-bed covering the pipeline is considered an eligible facility or integral ground supporting an eligible *damaged* facility. For this reason, requesting funding to design, engineer and construct a permanent repair to restore the

[1] FP 104-009-2, *Public Assistance Program and Policy Guide*, at 19 (April 2018) (PAPPG).
[2] 44 C.F.R. § 206.201(i) and (j); *see also* PAPPG at 84.
[3] 44 C.F.R. § 206.201(c).
[4] PAPPG, at 14-15.
[5] *Id.*
[6] PAPPG, at 128.
[7] *Id.*
[8] *See* Grants Manager Project 105166, Project Worksheet 53.

embankment and pipe-cover including mitigation to reinforce the pipeline is not eligible for FEMA PA funding.

Preparation and Review:

Preparer: Ricardo Juan Jose Morales, PD TFL

Signature: RICARDO JUAN JOSE MORALES Digitally signed by RICARDO JUAN JOSE MORALES Date: 2020.02.04 07:45:30 -08'00' Date: February 4, 2020

Office of Chief Counsel Reviewer: Dana Waller, Region IX Staff Attorney

Signature: DANA M WALLER Digitally signed by DANA M WALLER Date: 2020.02.04 10:19:36 -08'00' Date: _____

Approval:

PA Management: Jodi Hunter, Acting PA Branch Chief

Signature: _____ Date: 5 FEB 20

Document Index:

Document Description	File Name
GHD (Engineer) Site Plans, Sections and Detail	DR4434CA-Humboldt Bay Municipal Water District-WO_43965-DI_299085-Design Plan_Sections_Details.pdf
Project Report (Project #107110)	PRJ_Report_107110_20191011.pdf
Maintenance Activity Log (2002-Present)	Collector 4 Maintenance Log.pdf
Site Inspection Photographs (7-16-19)	DR4434CA-Humboldt Bay Municipal Water District-WO_43965-DI_299085-Photos.pdf
Site Inspection Report and SI Sketch	DR4434CA-Humboldt Bay Municipal Water District-WO_43965-DI_299085-SIR.pdf

Applicant Provided Photos of Collector #4 site during performance of EPMs (March-April, 2019)	HBMWD - Collector 4 Site Photos - Taken during EPM work.pdf
District Meeting and Resolution discussing damaged and proposed work	HBMWD - District Meeting and Resolution - 3.11.19.pdf
GHD Engineer Proposal, discussing the two phases of work to protect then stabilize and reinforce as permanent repair	HBMWD - GHD Proposal for Engineering Design, Permitting, & Construction Management.pdf

CONTINUING BUSINESS

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

To: Board of Directors

From: John Friedenbach

Date: February 7, 2020

Subject: Water Resource Planning (WRP) – Status Report

The purpose of this memo is to summarize recent activities and introduce next steps for discussion.

1) **Top-Tier Water Use Options**

   a) **Local Sales**
   Nordic Aquafarms and District staff met on January 14th to review water quality parameters and discuss supply operations. Staff is reviewing operational procedures to utilize Collector 1 during peak high turbidity events in the river.

   ESS of Laguna Hills continues to prepare our grant application to the US Economic Development Agency seeking funding for rehabilitating Station 6.

   A draft progress report from Samoa Peninsula Stakeholder Group working group was received in January. Staff is waiting for the finalized document to share with our Board.

   b) **Transport**
   No update

   c) **Instream Flow Dedication**
   Progress continues with the tasks contained in our WCB instream flow grant and claim reimbursements have been received.

Nordic Aquafarms Terminates Humboldt-Based Exec After Seeing Photo of Him Posing With a Lion He'd Killed

RYAN BURNS / THURSDAY, JAN. 9 @ 12:58 P.M. / BUSINESS LOST COAST OUTPOST

Nordic Aquafarms, the Norwegian company planning to build a land-based fish farm on the Samoa Peninsula, has terminated Shawn Harriman, just a week after his hiring was announced, in response to the above photo, which shows him posing with an African lion he had just killed.

The *Outpost* was sent a copy of this photo earlier this week, and after determining that it was the same Shawn Harriman we reached out to him for comment. (Photo not included)

Initially he declined to comment, saying he would like to wait until he returns to Eureka from Maine, where he'd been attending training for his new position as senior vice president of projects for the company's west coast subsidiary, Nordic Aquafarms California, LLC.

But when pressed on the matter, Harriman acknowledged that it's him in the photo.

"I have family in Africa. My wife's African, Kenyan," he said, "so we spend a lot of time there and have for the last 15 years."

He said his days of hunting are behind him. "What I did 15 years ago is not necessarily what I do today." He also said, "It's a different life in Africa."

After speaking to Harriman, the *Outpost* reached out to Nordic's local community liaison, Lynette Mullen, to see if the company cared to comment. A few minutes later, Executive Vice President Marianne Naess called.

"I just got word of this [photo] a few minutes ago," she said. "Our company is not supporting lion hunting. It's not in line with our company values, and we're looking into it right away."

Asked if it would affect Harriman's employment she responded, "I need to look into it. We take it very seriously."

Less than an hour later she emailed the following statement:

We have just been made aware of unfortunate circumstances pertaining to Shawn Harriman, who was recently hired as SVP Projects for Nordic Aquafarms in California.

We want our Humboldt County partners and the community to know that we take any concerns regarding our values or stewardship of natural resources very seriously and therefore we had no choice but to terminate our relationship with Shawn.

Over the last two weeks we have learned to know Shawn as a very competent and experienced Project Director and we think this situation is unfortunate both for Shawn and Nordic Aquafarms, but our company values will always prevail. Nordic Aquafarms is always guided by the highest animal welfare and environmental values.

Harriman, who said he'd already moved to Humboldt Hill with his wife and kids, told the Outpost that this photo was at least 15 years old. "That photo has been gone for a long time. It was never supposed to get out," he said.

He also said this was not an example of trophy hunting. "We were down on a ranch and the lion charged us," he said, adding that the photo was taken in South Africa.

The image, which includes a few Facebook comments from Harriman and friends, was posted online in 2015 to a blog called "The Disease of Trophy Hunting: Naming and Shaming These Sub-Humans."

It was subsequently shared on Twitter by several users.

CalTrout-The Current 2/2/2020

Written by

Dr. Robert Lusardi
California Trout-UC Davis Wild and Coldwater Fish Scientist

Dr. Sarah Yarnell
Senior Researcher - Center for Watershed Sciences, UC Davis

The California Environmental Flows Framework

One of the major factors affecting the decline of salmonids in California is insufficient streamflow. Streamflow has been referred to as the 'master variable' because it controls so many different aspects of the aquatic environment. For example, it strongly influences large wood and sediment recruitment, key contributors to habitat forming processes for salmonids and other native fishes.

It also cues specific life history events such as juvenile and adult fish migrations, behavior, and, more recently, has been shown to influence the relative success of introduced or invasive species (more on this later).

Changes in streamflow can also strongly affect water quality, including temperature, but also aquatic food webs. Not surprisingly, flow alterations are therefore a significant driver of salmonid population declines throughout California and elsewhere. One of the major questions fish biologists are often asked is "how much water do fish need?"

In 2016, a group of scientists from California Trout, UC Davis, UC Berkeley, The Nature Conservancy, Utah State University and the Southern California Coastal Water Research Project, with funding in partnership from the State Water Board, began to delve into this question and others.

They formed what is collectively known as the California Environmental Flows Framework (CEFF or the Framework) which, ultimately, seeks to determine ecological flow criteria for native fishes and other aquatic species throughout the state, which can be used to inform the development of environmental flow prescriptions.
The question of "how much water do fish need?" is a difficult one due to California's diverse geography and fish communities, which are further complicated by numerous micro-climates and management goals of different agencies.

To deal with these complexities, the Framework provides guidance on how to determine environmental flows and, thus, better define how much water fish need.

What are Ecological Flows?

Ecological flows seek to understand key linkages between streamflow and biological response.

If these linkages can be defined, then we can begin to piece together a flow regime that can be used to support native species.

Yet streamflow is affected by numerous factors, and numerous methods exist to quantify relationships between streamflow and biological response.

For the past several decades, most of the instream flow literature, as well as guidance from federal and state agencies, has examined how changes in flow were correlated with shifts in depth and velocity, particularly during key periods (e.g., spawning or rearing).

The thinking here was that if sufficient depth and velocity existed then sufficient habitat would exist and contribute to species recovery.

However, we now know that habitat, from a fish's perspective, goes far beyond just depth and velocity preferences and that streamflow and the full life history of salmonids are inextricably linked.

So, instead, CEFF uses a functional flows approach to better understand how much water fish need and, importantly, *when* they need it.

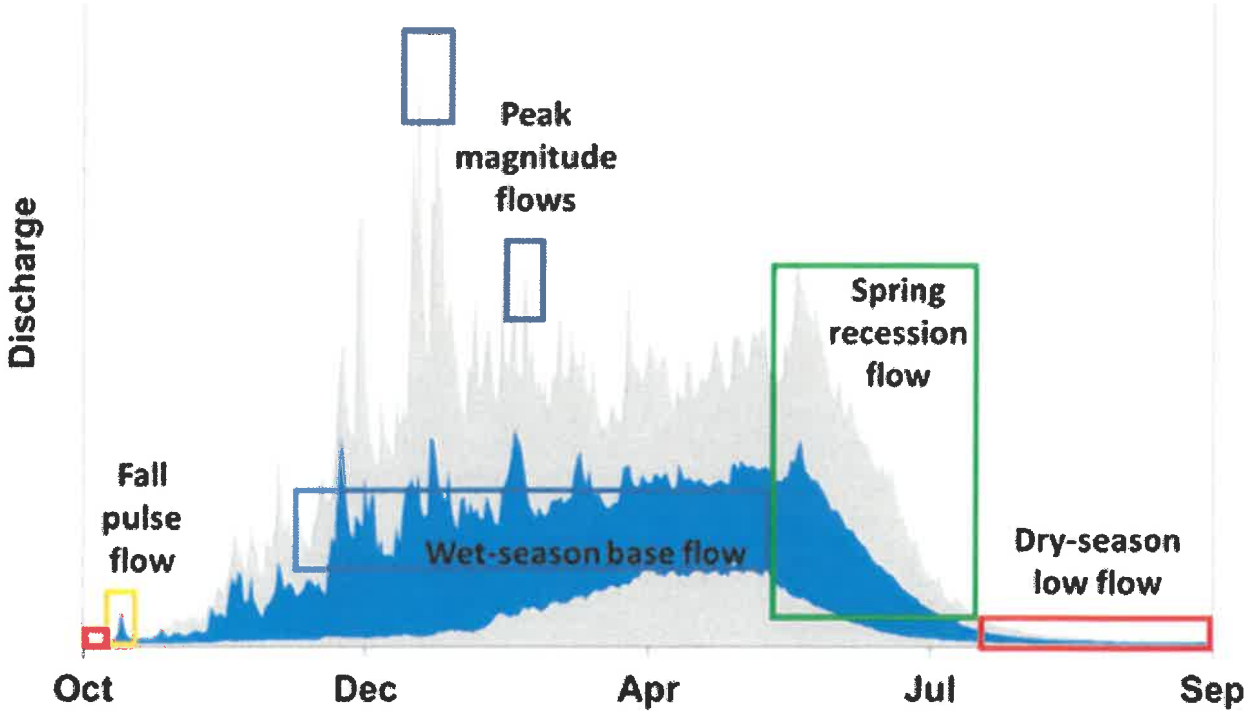


Figure 1. A natural hydrograph (flow regime) of a river in California showing 90th and 10th percentiles (grey shaded area) and mean daily discharge (blue shaded area). Functional flow components of the hydrograph are highlighted as boxes including a fall pulse flow, peak magnitude flows, a wet-season base flow, a spring recession flow, and dry-season low flow.

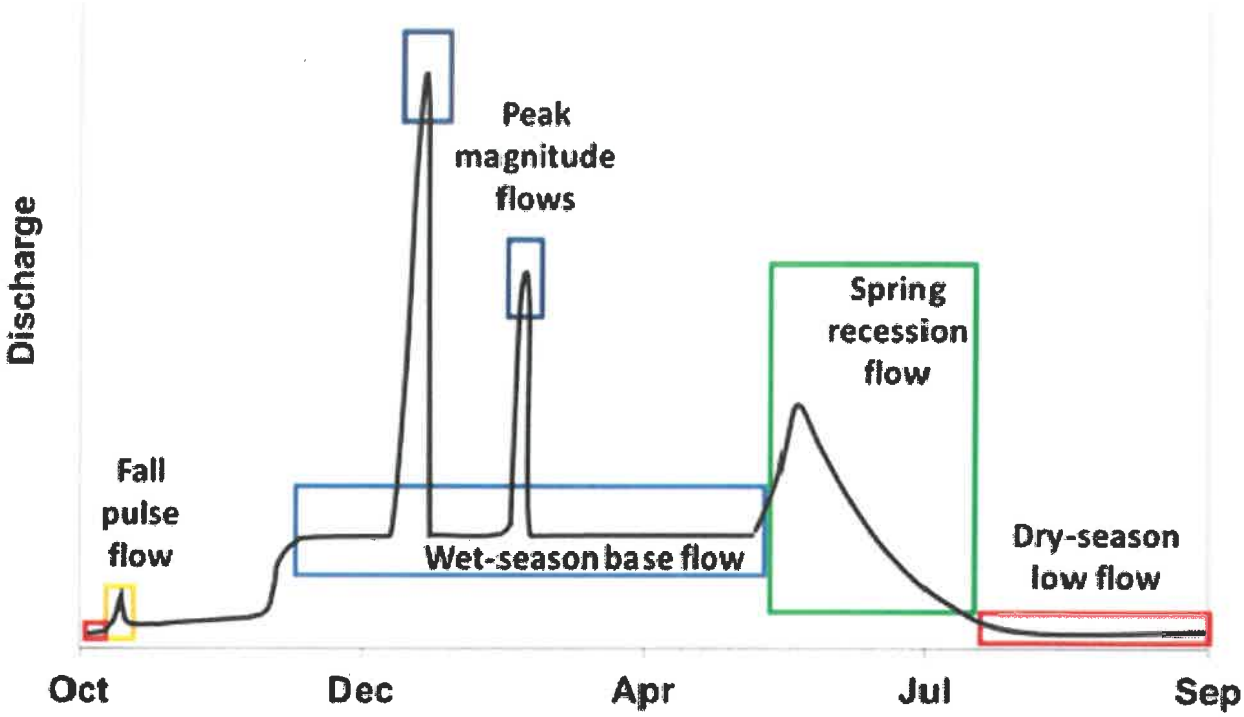


Figure 2. A functional flow regime where the functional flow components (e.g., fall pulse flows, peak magnitude flows, etc.) provide the foundation for geomorphic and ecological function while providing flexibility for water demand during certain times of year.

What are Functional Flows?

Functional flows, as defined by Yarnell et al. (2015, 2020), are components of the hydrograph that provide distinct geomorphic, biogeochemical, or ecological functions (Figure 1).

The functional flows approach provides a basis for estimating how much water is needed for the environment, where key components of the natural flow regime are targeted rather than the entire natural flow regime.

Desirable functional flow components have a disproportionally important role in supporting the physical and ecological processes that create and maintain habitat and trigger native species seasonal movements.

The Framework recognizes five distinct functional flow components including a fall pulse flow, peak magnitude flows, wet-season base flows, spring recession flows, and a dry season low flow (Figure 1).

These functional flows components, and associated characteristics (the magnitude, timing, rate of change, duration and frequency of flows) and metrics, can then be used to determine flow criteria at various scales and levels of detail for rivers and streams throughout California.

Instead of implementing an entire natural hydrograph, which may be unrealistic due to the numerous demands on freshwater in a basin, a functional flow hydrograph can be used (Figure 2).

This means that during certain, ecologically or geomorphically important periods, particular flows will be necessary to improve ecosystem health (i.e., summer base flows to provide cold-water during over-summering or a spring recession flow to improve juvenile salmon outmigration).

It also means that there are other periods when flows are less important, providing more flexibility for water supply and demand.

Functional Flows in Practice

The science behind functional flows is relatively new, but strong empirical evidence exists to suggest that implementation of this approach works for salmonids and other native fishes.

Putah Creek, a Central Valley stream that historically supported fall-run Chinook and other native fishes, was a testing ground for the functional flows hypothesis.

While this long-term experiment predated the term "functional flow", the same guiding principles were applied to establish a flow regime that encouraged native fish recovery after diversions and drought had wreaked havoc on the ecosystem during the early 1990s.

Specifically, Kiernan et al. (2012) found that implementation of certain flows including a fall pulse flow, spring spawning or recession flows, and summer base flows strongly affected the fish community, shifting it from one dominated by non-native fishes to a community dominated by native fishes.

More recently, Putah Creek has also experienced a strong resurgence in its fall-run Chinook population (see Moyle et al. 2017).

Aside from the technical aspects of establishing flow criteria for streams and rivers throughout California, CEFF also recognizes that multiple state and local agencies across California share responsibility for setting flow criteria that protect California's water resources.

These approaches historically have not been coordinated at the statewide level, resulting in fragmented and siloed flow management programs.

As such, an important policy component of the Framework is the formally adopted California Environmental Flows Workgroup, which is officially recognized by the State of California Water Quality Monitoring Council.
Quarterly meetings are open to the public and are attended by both federal and state agencies not just for technical updates, but also as an opportunity to provide feedback to the technical group.

We see this marriage of science and policy as fundamental step in setting environmental flow criteria for all streams in California.

Dr. Robert Lusardi is the California Trout-UC Davis Wild and Coldwater Fish Scientist and Dr. Sarah Yarnell is a senior researcher at the Center for Watershed Sciences, UC Davis. For more information on the CEFF, pleases visit https://ceff.sf.ucdavis.edu/

Literature Cited

Kiernan, J. D., Moyle, P. B., and Crain, P. K. 2012. Restoring native fish assemblages to a regulated California stream using the natural flow regime concept. Ecological Applications 22(5): 1472-1482.

Moyle, P. B., Lusardi, R. A., Samuel, P. J., and J. V. E. Katz. 2017. State of the salmonids: status of California's emblematic fishes 2017. A report commissioned by California Trout. 579 pp.

Yarnell, S.M., Stein, E.D., Webb, J.A., Grantham, T., Lusardi, R.A., Zimmerman, J., Peek, R.A., Lane, B.A., Howard, J., and Sandoval-Solis, S. A functional flows approach to selecting ecologically relevant flow metrics for environmental flow applications. *River Res Applic.* 2020; 1–7. https://doi.org/10.1002/rra.3575

Yarnell, S. M., Petts, G. E., Schmidt, J. C., Whipple, A. A., Beller, E. E., Dahm, C. N., Goodwin, P., and Viers, J. H. 2015. Functional Flows in modified riverscapes: hydrographs, habitats, and opportunities. Bioscience 65(10): 963-972.

From: Mark Feldman

SECTION H3 PAGE NO. 1 1/13/20

Humboldt Bay Municipal Water District
Candidate Questions

1. Do you reside within Division 3 and do you expect to live there through 2020?
   yes
2. Is it your intention to run for election in 2020?
   Yes
3. Do you have any possible conflicts of office or interest (this could include contractual relationships, District customers, or Ruth Lake CSD)?
   No

4. Describe any prior experience serving on a Board?
   I have not served on a board before. However, I have sat in on one HBMWD board meeting and several County Commissioner and Board of Supervisors meetings.

   4a. May we contact former/current Board members?
   N/A
   4b. If yes, please provide contact information.
   N/A

5. What is your understanding of the District's Mission? My understanding is clear: The District's Mission is to reliably deliver high quality drinking water to the communities and customers it serves in the greater Humboldt Bay Area at a reasonable cost; reliably deliver untreated water to it's wholesale industrial customers at a reasonable cost; and protect the environment of the Mad River watershed to preserve water rights, water supply and water quality interests of the District.
6. Our Board meets the second Thursday of the month. The meetings are potentially full day meetings, beginning at 9am. If chosen, how soon can you begin serving?
   Immediately

Humboldt Bay Municipal Water District
Candidate Questions

1. Yes, I do reside in Division 3 and I do plan to live here through 2020. I checked with the County Elections office before I applied.

2. Yes, if I am selected, I do plan to seek election to the position in 2020.

3. To the best of my knowledge, I do not have any possible conflicts of office or interest. I have no contractual relationships with any district customers, or other CSD's.

4. I have served multiple terms as a Director at the Humboldt Builder's Exchange perhaps 20 years (or more) ago. Dale Maples and Brian Pritchard are two fellow board members I recall serving with, as well as the late Ken Omsberg.

I served two terms as a Director on the Greater Eureka Chamber of Commerce, about 1997/2000, and 2013/2016. J. Warren Hockaday and Don Smullens were the Chamber Executive Directors during those periods.

I have served as a director of the Kiwanis Club of Henderson Center for many years. I am also a past President of the Kiwanis Club of Henderson Center. John Friedenbach is our Club Secretary. Neal Latt is a fellow Board member of the Kiwanis Club of Henderson Center

4a. Yes you may contact current/former board members.

4b. I can collect contact information and names of current/former board members if necessary.

5. As I understand, the Districts Mission is to:
Provide high quality drinking water to their municipal customers, and provide a reliable supply of untreated water to their industrial customers.
Ensure the system operates reliably.
Provide water to their customers at a reasonable cost.
Protect the environment of the Mad River watershed, and the water rights of the District.

6. I am available to begin serving immediately. I am able to attend your February 13, 2020, board meeting.

FROM THE DESK OF

MARK FELDMAN

January 7, 2020

Humboldt Bay Municipal Water District
828 7th Street
Eureka, CA 95501

Dear HBMWD Board of Directors,

My name is Mark Feldman and I'm interested in serving on the Board of Directors for the Humboldt Bay Municipal Water District representing Division 3.

Originally from the East Coast my wife, Alexis, and I have lived in Humboldt County since 1993. Water, in particular water from the HBMWD, has played an integral role in our story and success in Humboldt County as several of the endeavors I've been a part of have been "water-centric".

From 1999 - 2007 I was the Winemaker for Robert Goodman Wines in Arcata. From 2008-2014 I owned and operated my own micro-winery in Arcata. In 2015 I founded Proxima Investments, LLC which as of March 6, 2019 became Humboldt County's first State licensed indoor hydroponic cannabis cultivation facility and only the fifth in the entire State.

I feel that in my decades of experience as a Humboldt County business owner and employer have given me the foundation to understand complex operational systems, successful employee and financial management, and a deep care for the wellbeing of my community.

If appointed to represent Division 3, I would be honored to serve with the existing board members and do my best to help ensure that the HBMWD operates in an efficient manner, tackles it's obstacles, and achieves it's goals of securing and reliably delivering high quality and affordable water for its Humboldt County residents and customers as well as protecting water rights and the environment of the Mad River watershed.

Sincerely yours,

Mark Feldman

Mark Feldman

Profile

Attention to detail, listening, and communication, are the attributes that I'd most credit as the foundation for my business successes in life so far. For over 26 years in Humboldt County I've enjoyed working for others as well as being an entrepreneur owning my own businesses within both the Wine and Cannabis Industries.

Experience

Winemaker, Robert Goodman Wines - Arcata, CA 1999 - 2007
- Lead Winemaker
- Responsible for production of wines from grape to bottle
- Oversight and scheduling of employees
- Presenting at numerous benefits, conferences, and exhibitions

Owner/Winemaker, California Custom Cellars - Arcata, CA 2008 - 2014
- Specializing in custom labeled wines for restaurants and hotels, as well as private and corporate clients.
- Procurement and distribution of bulk wines

Founder/Head of Cultivation, Proxima Investments - Arcata, CA 2015-Present
- Head of operations and sales
- First State licensed indoor cannabis cultivation permit in Humboldt County
- Fifth State licensed indoor cannabis cultivation permit in California
- Multiple award winning products grown with 100% rain catchment water and 100% buy-in with PG&E's Solar Choice Program.

Founder/Owner of AmeriCann Hydrotech - Arcata, CA 2018-Present
- Sustainable Indoor Hydroponic Cannabis Cultivation Consulting

Education

University of Delaware, Newark DE 1989 - 1990
Flagler College, St. Augustine, FL 1990-1991
University of Delaware, Newark DE 1991-1992
UC Davis - Winemaking Laboratory Analysis Program - 2001

Skills	- Understanding of complex operations and science in wine production and cannabis cultivation industries - Employee management - Marketing, sales, and financials - Data analysis - Extreme attention to detail - Good communication and leadership

LINDBERG GEOLOGIC CONSULTING
David N. Lindberg, CEG

January 8, 2020

H.B.M.W.D. JAN - 8 2019

Humboldt Bay Municipal Water District
Post Office Box 95
Eureka, California, 95502

Subject: Director Vacancy, Division 3

To whom it may concern,

My name is David Lindberg and I am interested in applying for the vacant director position for Division 3. I am a licensed professional Geologist, and a Certified Engineering Geologist (in California and Oregon). Apart from my time in graduate school, I have been employed professionally as a geologist since graduating from Humboldt State University in 1981. I am very interested in water rights and water resources in general, and in the Mad River basin in particular. A copy of my resume is attached.

In the past, I have consulted for the District regarding slope stability issues near the Matthews Dam. I have also worked on other projects within the Mad River basin for other private and public clients. Several years ago, while a Chamber Director, I served as a representative of the Greater Eureka Chamber of Commerce and business community on the Citizens Advisory Panel working to find new ways to take advantage of the Districts water rights on the Mad River and Ruth Lake. In my view, our District is in a unique position with regard to water rights and has the potential to contribute, in a positive way, to the quality of life here on the north coast.

If I am selected, I will work to ensure that our community's access to safe, clean water is protected and preserved. I support protection of our District's water rights and expansion of the customer base within the existing service area. I also support the idea of expanding services into other underserved areas Humboldt County.

Thank you very much for considering me as a potential Director. I look forward to serving and making a contribution to the future of my fellow north coast residents.

Sincerely,

David N. Lindberg

David N. Lindberg, CEG 1895
Lindberg Geologic Consulting

DNL:sll

Attachment

Resume of DAVID N. LINDBERG, P.G., C.E.G.

EXPERIENCE

Mr. Lindberg operates a geologic consulting firm in Eureka, California, providing engineering geologic soils investigations and reports, landslide investigations, geologic hazards investigations, and other geologic services in northwestern California and southern Oregon. At LACO he served as the Department Head for Geology and Geotechnical Engineering, the Vice President of Operations, and the company Safety Officer. He retired from LACO ASSOCIATES (LACO) as a Firm Principal in 2010 to found Lindberg Geologic Consulting. Since 2010, Lindberg Geologic Consulting has served our clients with over 350 different projects.

Mr. Lindberg has over 35 years of experience conducting geologic/geotechnical investigations in western North America including: materials testing, construction observation, nuclear density testing, radiation safety officer, engineering-geologic and geotechnical investigations for public, commercial and residential developments; geologic hazard assessment for the design of foundations, roadways, and retaining structures; slope stabilization measures; engineered grading cut and fill; coastal developments; geologic investigations of Timber Harvest Plans in steep unstable terrain; landslide mapping; quantitative and qualitative slope stability analysis; hydrogeologic characterization of groundwater aquifers; pump, slug, and bail-down tests; seismic hazards investigations and fault trench mapping for facilities located within active fault zones for public and private development; surficial and bedrock mapping; tectonic and geomorphic mapping; aerial photographic and satellite imagery interpretation and mapping; drilling, sampling, and logging of geotechnical test borings; and drilling, sampling and logging of environmental test borings for contaminant delineation and assessment.

Recent projects include soils characterization, and geologic/geotechnical investigations, (with reports) for commercial and industrial developments, single family residential developments and roads. Typically, these projects include assessment of regional and local geologic and seismic setting, slope stability, soil stability and bearing capacity, and recommendations for foundation design and grading. He has conducted landslide investigations that include assessment of influential factors leading to failure, evaluation of contributory geologic and hydrologic factors, and consulting with civil and geotechnical engineers to design repairs to landslide-damaged sites.

PROFESSIONAL REGISTRATIONS

California Professional Geologist
Oregon Professional Geologist
California Engineering Geologist
Oregon Engineering Geologist

CERTIFICATIONS

QSP/QSD for Stormwater Pollution Prevention
Radiation Safety Officer (RSO) - CPN Corporation
Nuclear Gauge Safety and Operation - CPN Corporation
OSHA Competent Person (Excavation and Trench Shoring Safety)
Hazardous Waste Operations and Emergency Response - OSHA 29 CFR 1910.120
Association of Engineering Geologists - Member

EDUCATION

Humboldt State University - B.A. Geology, 1981
Graduate Studies in Applied Geology; 1990 Phi Kappa Phi

CONTINUING EDUCATION

Design for Slope Stability and Landslides - University of Wisconsin
Engineering Geology for Timber Harvesting,
Wildland Management and Watershed Restoration - AEG/CGS Workshop
Ground Modification Technology - Hayward Baker Corporation
Managing Petroleum Impacted Sites-Risk Based Corrective Action - U.S. Riverside

EXAMPLES OF PROJECTS

College of the Redwoods; Student Services/Administration & Theater Buildings - Eureka, CA.
Conducted a fault hazard assessment for the new Student Services/Administration and Forum Theater Buildings, a $17.6 million project on College of the Redwoods Eureka campus. Duties and responsibilities included management and review of extensive trench investigation, Little Salmon Fault Zone, and detailed analysis of site-specific stratigraphy and regional seismic risk. The project report delineated likely "rupture-free" areas for development of the new Student Services/Administration and Forum Theater Buildings as well as the learning Resource Center and Child Development Center which were built over the past several years. I have provided mitigation and design recommendations to the project architects and structural engineers.

City of Eureka: High Water Tank Project - Eureka, CA
Conducted a geotechnical investigation with foundation design recommendations and geotechnical inspection during construction of the new high water tank (water tower) for the City of Eureka. Provided management of construction inspection and materials testing during the project construction.

City of Eureka: Fairway Drive Culvert Project - Eureka, CA
Conducted a geotechnical investigation with foundation design recommendations and geotechnical inspection during removal construction of the old CMP culvert with a new reinforced concrete box culvert for the City of Eureka. Provided management of construction inspection and materials testing during the project construction.

YIHA (Yurok Indian Housing Authority) Student Apartments, Eureka, CA
Provided engineering geologic consulting services, including field investigation and reporting with foundation design, grading and paving recommendations for a new, three-story apartment building. Client: David Pierce, Architect.

Bear River Band of Rancheria Indians, Loleta and Fortuna, CA
Performed and managed soils and foundation investigations for the development of the Bear River Casino, and soils and foundation investigations for Bear River Pump and Play, and the Bear River Rancheria housing development in Loleta, as well, and the Bear River tribal housing apartments in Fortuna, CA. Client: Bear River Band of Rancheria Indians (work performed while at LACO Associates).

Smith River Rancheria, Smith River, CA
Managed drilling investigations of sites for wastewater disposal. Client was an out of the area consultant.

Resighini Rancheria, Klamath, CA
Performed and managed soils investigations for roadway and bridge crossing improvements. Client: Resighini Rancheria (work performed while at LACO Associates).

Humboldt Bay Power Plant, Eureka, CA
Consulted for project engineer at Whitchurch Engineering Inc. regarding slope stability calculations and stabilization of non-hazardous drilling spoils at Pacific Gas and Electric's power generating station on Humboldt Bay.

Redwood Charter School, Fortuna, CA
Conducted engineering-geologic soils investigation and observation of foundation excavations for new elementary charter school in Fortuna.

Grocery Outlet, Fortuna, CA
Conducted engineering-geologic soils investigation and observation of foundation excavations for new Grocery Outlet store.

Grocery Outlet, Cloverdale, CA
Conducted engineering-geologic soils investigation with report, and provided soils stabilization recommendations for new Grocery Outlet store.

Grocery Outlet, McKinleyville, CA
Conducted engineering-geologic soils investigation with report, provided soils stabilization recommendations, and observation of foundation excavations for new Grocery Outlet store.

Humboldt Bay Municipal Water District, Eureka, CA
Conducted engineering-geologic field investigation and report on the geologic stability and safety of Matthews Dam at Ruth Lake on the Mad River, for permit renewal by the District.

New Business

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

To: Board of Directors

From: John Friedenbach

Date: February 7, 2020

Subject: District's Safety Program

Once again it is time for our annual employee recognition regarding workplace safety. Dale and I will provide an overview of our program and accomplishments at our Board meeting next week. This memo provides a brief introduction.

PRIORITY AND PLACE

Achieving employee safety and public safety is a top priority for the District. I am pleased to work for an organization that values this objective and takes safety seriously.

The Board has adopted five goals which support our District Mission. Goal Number 1 is Safety and Public Health. It reads:

- Employ safe work practices to ensure worker and public safety at all times. Strive for no on-the-job reportable injuries each year.
- Operate the regional water system in accordance with state and federal safe drinking water laws and regulations at all times to protect public health.

The District has a "safety philosophy" as well as a strong safety program. The Board has consistently supported our safety philosophy and program.

COMPONENTS OF THE PROGRAM

Important components of the District's safety program are as follows:

1) Buy-in and support *from* Management. We need to set the standard and "walk the talk."

2) Buy-in and involvement *by* the employees.

3) A meaningful Injury, Illness and Prevention Plan (this is a regulatory requirement).

4) An active Safety Committee that is listened to and supported. Our committee is comprised of the Superintendent, one Supervisor, and two employees (one from the Maintenance Department and one from Operations). Membership on the committee rotates each year. Attached for your information are minutes from the last safety committee meeting for you to see the issues that are addressed.

    a. A meaningful training program. The District has an extensive training program which supports not only employee safety, but ongoing operations, and emergency response activities too. We use ACWA/JPIA's extensive "lending library" for training resources (such as DVDs, videos, manuals), and we also use the North Coast Safety Consortium for local classroom training. Attached is this year's safety training program which lists the training topic as well as the instructor.

5) Properly fitted and maintained Personal Protective Equipment (PPE) which is suited to the job. The District provides employees with the necessary PPE such as hardhats, safety glasses, hearing protection, respirators, self-contained breathing apparatus, and protective electrical gear. The District trains in its proper use and care. As a matter of policy, the District also reimburses employees for the cost of safety shoes appropriate to the position and provides District safety attire.

6) Other Resources – Safety Manual. The District has developed and maintains a comprehensive safety manual to guide work practices, as well as meet various regulatory requirements. The Table of Contents of our Safety Manual is attached for your information.

7) Recognition – The District instituted a safety incentive/reward program for full-time regular employees. The District pays $200 incentive to each current employee who has been employed for at least six months and meets the criteria listed below. The District also awards one grand prize of $500, based on a drawing of all eligible employees. This year, ***Chris Merz*** is the grand prize winner.

Criteria to be eligible for incentive award:

1. Participate in at least seventy five percent (75%) of monthly safety meetings during the calendar year. For newly hired employees that meet the eligibility requirements, percentage applies to eligible monthly safety meetings.

2. Wear appropriate PPE when required on the job.

3. 3a. Provide one safety awareness or preventative suggestion to supervisor and have it documented at a safety meeting or with the Safety Committee.

   3b. Report an incident or near miss incident or unsafe conditions.
   3c. Receive a "satisfactory" rating on annual performance evaluation under the "Safe Practices" category.

One of 3 per calendar year

I am proud of the "safety culture" developed at the organization, and the results we have achieved. We have employees who "think about" safety and routinely employ safe work practices. As a result, we have had very few on-the-job injuries. Additionally, the District participates in ACWA/JPIA's Commitment to Excellence Program and H.R. LaBounty Safety Award Program. We continually strive for implementation of best practices to prevent injuries and claims.

I would also like to acknowledge that Dale Davidsen, our Superintendent, Chris Merz our Assistant Maintenance Supervisor and Chris Harris our Business Manager who are instrumental in the continuation of the safety culture that exists within the organization today along with all of our employees who work safely every day. The entire staff continue to promote and grow this safety awareness.

Once again, Dale and I wish to thank the Board for your support in this area. Your support truly makes a difference.

Attachments:

2020 Safety Training Program Topics and minutes from last meeting
Table of Contents from Safety Manual
ACWA/JPIA Commitment to Excellence
ACWA/JPIA H.R .LaBounty Safety Award Spring 2019

Safety/Training Program 2020

This is the Safety and Training schedule for 2020. Meetings will be scheduled well in advance to prepare all personnel in order to attain maximum participation. These classes will be scheduled in the planner for 2020 for everyone's reference.

JAN **Code of Safe Practices (WIIP):** Annual — Dale
Reference Material: HBMWD Policy
Class Time: 1 hour

EAP Overview-Dam Safety Plan: Annual — Dale
Reference Material: HBMWD Policy and procedure
Class Time: ½ hour

Generator Air Quality Permit Requirement: Annual — Mario/Paul
Reference Material: AQMD Permits
Class Time: ½ hour

FEB **Respirator Safety/Fit Testing:** Annual — Chris
Reference Material: District Safety Manual & JPIA video.
Fit test for each employee.
Class Time: 2 hours

Hearing & Respiratory Exams: Annual — Becky/M.R.O.H.
Class Time: 1 hour

MAR **Lock-out Tag-out:** 2yrs — Electrical Dept.
Reference Material: Review of HBMWD safety procedures.
PowerPoint presentation on subject, along with short video.
Class Time: 1 hour

Arc Flash Awareness: 2yrs
Reference Material: Review of practices & safety procedures — Electrical Dept.
to avoid exposure. NTT training manuals. JPIA video
Class Time: 1 hour

APR **Confined Space/Gas Detectors:** Annual — Ryan/Electrical
Reference Material: Review of HBMWD policy,
& a PowerPoint presentation.
Class Time: 1 hour

Heat Illness Prevention Program: Annual — Chris
Reference Material: Review of HBMWD policy
& precautions. JPIA training video
Class Time: 1 hour

MAY **Chlorine Leak Response/Cl2 Leak 'B' Kit:** Annual — Chris/Ryan/Mario/Paul
Reference Material: HBMWD Policy and procedures. PowerPoint presentation on system & equipment. Run possible response scenario.
Class Time: 2 hours

JUN **Workplace Ergonomics:** Annual — Mario
Reference Material: PowerPoint presentation on ergonomics in the field and office. Short video demonstrating key points.
Class Time: 1 hour

Ladder & Cable Car Safety: 3yrs — Paul
Reference Material: PowerPoint presentation on ladder and cable car safety. Review of District procedures and safe practices
Class Time: 1 hour

JUL **Traffic Control:** Annual — Ryan/JPIA
Reference Material: Cal Trans Reference Book,
PowerPoint presentation and review of District equipment
Class Time: 1.5 hrs.

Asbestos & Silica Handling: Annual — Chris/JPIA
Reference Material: Review of HBMWD safety manual
policy, procedures & exposure control plan. Training video also.
Class Time: 1 hour

AUG **Forklift Safety: Annual** — Chris
Reference Material: PowerPoint presentation on forklift function, review of operations manual and drive test of training course.
Class Time: 2.5 hours

Rigging Safety: Annual — Keith
Reference Material: NCCCO Crane operator training handbook/PowerPoint presentation
Class Time: 1 hour

SEP **Personal Protective Equipment:** 3yrs — Russell/JPIA
Reference Material: Review of HBMWD safety equipment and usage. PowerPoint presentation on subject along with sort video.
Class Time: 1 hour

Bloodborne Pathogens: Annual — Chris/JPIA
Reference Material: Review of District exposure control plan. PowerPoint presentation and video on subject.
Class Time: 1 hour

OCT **Trench and Excavation Safety:** Annual — Ryan
Reference Material: PowerPoint presentation on safe practices and procedures. Review of HBMWD shoring equipment.
Class Time: 1 hour

NOV **ISI/Sperian SCBA Training:** Annual — Chris
Reference Material: PowerPoint presentation on subject matter and review of District safety policy & user's manuals.
Class Time: 2 hours

Fire Prevention, Escape & Extinguisher: 3ys — Mario/Paul
Reference Material: PowerPoint or video on fire prevention, extinguisher types and uses. Review of District emergency action plan of various facilities evacuation procedures.

DEC **S.D.S./Right to Know/Spill Prevention:** Annual — Chris
Reference Materials: District safety manual & Powerpoint presentation on subject matter.
Class Time: 1 hour

Note: We are currently trying to schedule with JPIA to do a couple classes this year with Thor Benzing as a trainer on a couple different subjects.

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
Workplace Illness and Injury Prevention Program
Safety Committee Meeting

Minutes

Date: January 24, 2020

1. **Meeting** called to order at 1400hrs.

2. **Members** Attending: Dale Davidsen
Keith Daggs
Ryan Murphy
Chris Merz
Observer: John Friedenbach

3. **Minutes** were approved from Meeting 19_4 on October 7, 2019. M/S/C Daggs/Murphy.

Old Business:

A. It has been brought to attention that the District's "Contractor's Agreement" could be updated to reflect more current safety policies and safe work practices. *(Dale will evaluate what content shall be altered and create a site orientation form for outside contractors to review before starting work on District property. This form has been created and is currently awaiting approval to be instated.)*

B. It has been observed that some of the District's Safety Manual policies and procedures on various topics could be revised or updated. A list of these policies and procedures will be created by the Safety Committee. *(These revisions will be assigned to committee members to complete as time allows. Some revisions have been made to certain policies and programs. A list of updated policies will be created and reviewed at the next meeting. NLT-Until all necessary changes are met.)*

C. Upon a recent inspection of Collector #1, it was noted that there is no current phone located on the collector starter deck. *(Through investigation, the cost of re-establishing a phone line connection would be very expensive and has been deemed unnecessary. Other means of communications are available such as portable radios and cell phones.)*- ***(Complete Remove)***

D. Through recent chlorine leak response training, the purchase of some additional response equipment has been brought to attention. Some of these items should possibly be reviewed for a future budget project. *(A list of items has been generated and reviewed by the committee. It was discussed and agreed that this item would be a great budget project and will be submitted for the 2020-2021 year. This item of business will be held in the interim due to the possibility of the District considering onsite hypochlorite generation in the near future.)*

E. Tim Farrell suggested possibly installing an exterior emergency shut-down button on the outside of the Chlorine Building to reduce the risk of exposure during a potential

leak situation. *(This idea was reviewed by committee members as a valid safety improvement. The button location being on the exterior of the building did pose some questions of concern, in regard to this being the appropriate location for it. Through committee review it was decided that a shut-down button located on the Essex SCADA System would be the best location. It has been discussed to complete this programming and installation during the Chlorine Building PLC upgrade project, which is forecasted to be complete by early 2020. NLT-4-14-20)*

F. Discuss the Districts facility safety inspection forms with new safety committee members and assign locations for inspections. Forms will be completed by the October meeting and open for review. *(Inspections for 2019 have been completed for District facilities and repairs of deficiencies have been made. This inspection process has been explained to new committee members and assignments will be made at the next meeting.)*

G. It has recently been noted that during recent cleanings of the restrooms in Park #1 & 4 that hypodermic needles have been found on occasions. The question of how to dispose of the needles have been brought up, along with what regulatory standards does the District need to abide by to stay in compliance. *(Through research of regulatory standards on bloodborne pathogens it has been recognized that the District should create an exposure plan, to protect and educated its employees. Development of this exposure plan has been completed and approved. It is now located in the Districts Safety Manual and available for staff to review. -* ***(Complete Remove)***

New Business:

A. During a recent safety meeting, a question was raised of what rules and regulations apply to District employee's when climbing fixed ladders. A comment was made if it was necessary for the employee to wear a harness and lanyard when ascending fixed caged ladders. *(Research on what OSHA rules and regulations on ascending fix ladders will be done. Further discussion on this topic will be done at the next meeting to reach a conclusion. NLT-4-23-20)*

B. Mario Palmero suggested installing some ladder guides on the 10,000 gallon diesel tank for checking the fuel level manually. *(Keith will take a on the task of possibly fabricating a ladder bracket to safely perform this task. NLT-4-23-20)*

C. Dale brought to the attention that the District's Confined Space Inventory List should be updated to reflect corrections on abandon vaults within the District's distribution system. *(Chris will evaluate list and make the appropriate edits to it. NLT- 4-23-20)*

D. During a recent Collector check, Ryan Murphy discovered that the ladder transition from the valve deck to the motor starter deck to be awkward. He suggested on possibly

installing a grab handle to make it an easier transition. *(Ryan M. will investigate a handle location on the existing guardrail for installation. NLT-4-23-20)*

E. John mentioned that the fire escape plans at the Main Office could be updated to reflect a recent fire extinguisher relocation. *(Chris will redraw escape maps to reflect changes. NLT-4-23-20)*

H. **Meeting** adjourned: 1520hrs.

I. **Next** meeting scheduled for April 23, 2020.

Prepared by: Chris Merz

Copy: General Manager
Superintendent
Maintenance Supervisor
Operations Supervisor
Bulletin board and file

TABLE OF CONTENTS

ASSOCIATION OF CALIFORNIA WATER AGENCIES
JOINT POWERS
INSURANCE AUTHORITY

Commitment to Excellence

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

and the Association of California Water Agencies/Joint Powers Insurance Authority (ACWA/JPIA) in mutual support for ensuring the most consistent, cost effective, and broadest possible affordable insurance coverage and related services, and in partnership with all ACWA/JPIA members, and in the interest of reducing ***Humboldt Bay Municipal Water District's*** insurance costs, commit to a program of excellence that, through the implementation of "best practices" reduces the potential and frequency of:

- **Vehicle Losses**
- **Infrastructure Related Losses**
- **Construction Related Losses**
- **Employment Practices Claims**
- **Ergonomic (Musculoskeletal) and Fall Injuries**

Walt "Andy" Sells (CEO, ACWA/JPIA)
Signature

(General Manager)
Signature

(Board Member)
Signature

(Board Member)
Signature

(Board Member)
Signature

(Board Member)
Signature

(Board Member)
Signature

YOUR BEST PROTECTION

H.B.M.W.D. MAY 06 2019

May 2, 2019

ACWA JPIA

P. O. Box 619082
Roseville, CA 95661-9082

phone
916.786.5742
800.231.5742

direct line
916.774.7050
800.535.7899

fax
916.774.7040

claims fax
916.786.0209

www.acwajpia.com

Humboldt Bay Municipal Water District
Staff and Supervisors
P.O. Box 95
Eureka, CA 95502-0095

Re: H.R. LaBounty Safety Awards Program

Dear Staff:

On behalf of the ACWA Joint Powers Insurance Authority, we would like to thank you for your recent safety award submission.

We greatly appreciate that you contributed your time and efforts to promote safe workplace behavior and improve existing operational practices. It is individuals like you who demonstrate safe behavior, take part in training, and participate in risk-reducing actions that foster a positive safety culture.

Enclosed is a certificate in honor of your achievement. The entire JPIA membership is successful because of individuals like you. *We encourage you to cash the enclosed check promptly.*

Please continue your risk management practices. We look forward to future safety award submissions from you.

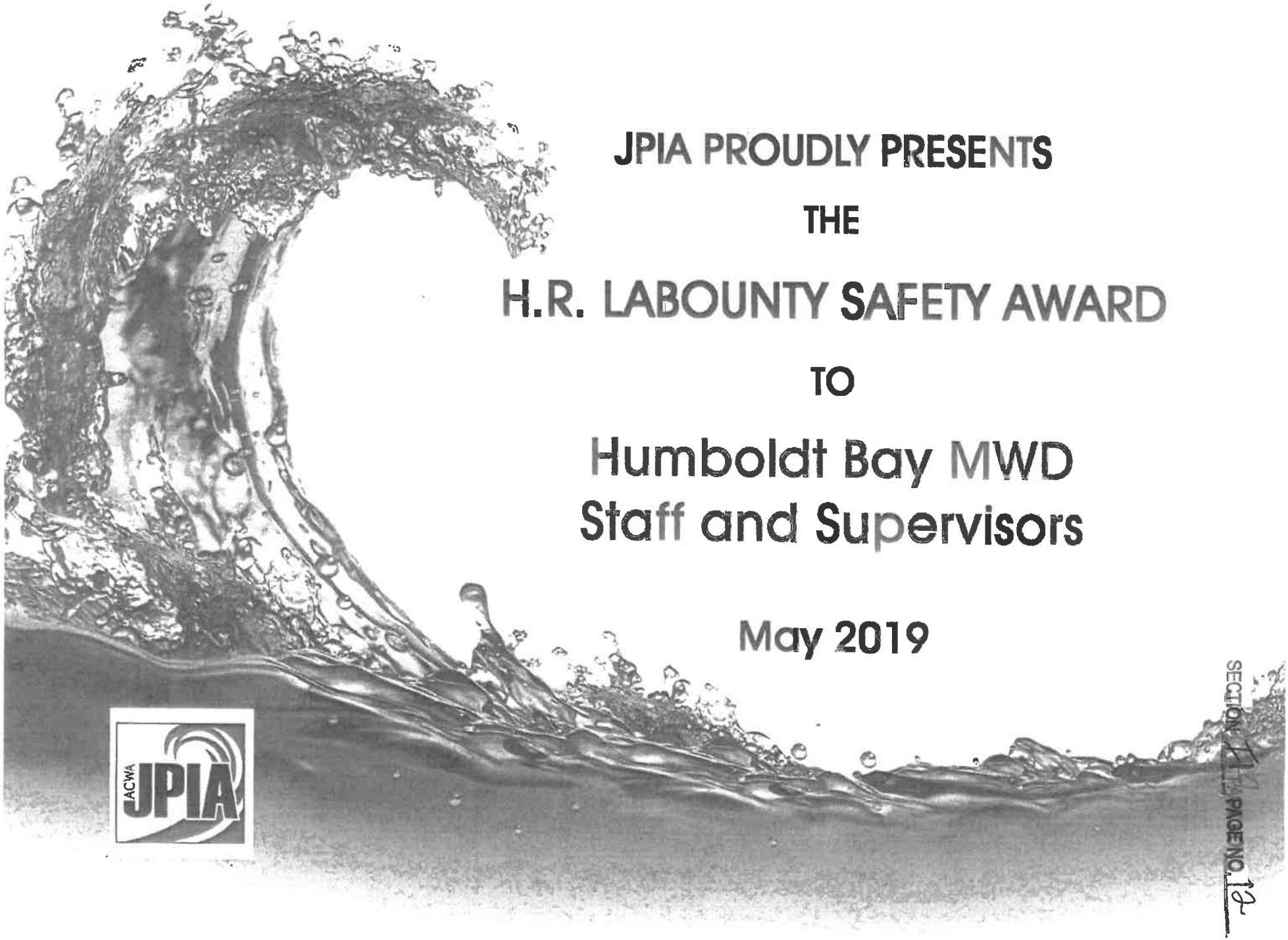
Sincerely,

Walt "Andy" Sells

Walter "Andy" Sells
Chief Executive Officer

519:ll

Enc. Certificate



JPIA PROUDLY PRESENTS

THE

H.R. LABOUNTY SAFETY AWARD

TO

Humboldt Bay MWD
Staff and Supervisors

May 2019

ACWA JPIA

SECTION 11 PAGE NO. 12

To: Board of Directors

From: John Friedenbach

Date: February 7, 2020

Subject: Rededicating the Turbidity Reduction Facility (TRF)

****

BACKGROUND

Resolution 2003-8 (see attached) recognized and honored the service of Lloyd L. Hecathorn and dedicated the TRF in his honor. Lloyd served on the Board for 22.5 years. Barbara Hecathorn (Lloyd's wife) attended meetings regularly during this time and accompanied Lloyd to ACWA Conferences. She was well versed in water and the District activities. Barbara Hecathorn joined the HBMWD Board in August of 2005 and faithfully served on the Board for 14 years, until December 2019. (See attached Resolution 2019-20). Lloyd and Barbara Hecathorn served the District as Directors for a combined 36.5 years.

RECOMMENDATION

Staff recommends the Board rededicate the TRF as the Lloyd L. and Barbara Hecathorn Turbidity Reduction Facility. If the Board concurs, staff will bring back a draft resolution for consideration and possible approval next month and begin the process for rededication.

RESOLUTION NO. 2003-8

RESOLUTION OF THE HUMBOLDT BAY MUNICIPAL WATER DISTRICT BOARD OF DIRECTORS RECOGNIZING AND HONORING THE OUTSTANDING SERVICE OF LLOYD L. HECATHORN AND DEDICATING THE TURBIDITY REDUCTION FACILITY (TRF) IN HIS HONOR

WHEREAS, LLOYD L. HECATHORN has continuously served this District with distinction and honor as a Director since January 1981; and

WHEREAS, his service to the District has included being its Vice-President from 1984 to 1987 and 1990 to 1991; President from 1987 to 1989 and from 1991 to 1993; and, Secretary-Treasurer from 1993 to the Present; and

WHEREAS, he additionally has served the District as an Association of California Water Agencies (ACWA) Board Member from 1998 to 2001; ACWA Region I Board Vice-Chairman from 1996 to 1999 and Chairman from 2000 to 2001; and a ACWA-Joint Powers Insurance Authority Director from 1983 to the Present.

WHEREAS, in performing his duties as Director, LLOYD L. HECATHORN gives generously and unselfishly of his time, energy and talents and has made a great contribution to the development and current well being of the District; and

WHEREAS, the Directors of this District deem it fitting and proper to provide a tangible, permanent commemoration of the devotion to duty, leadership and integrity demonstrated by LLOYD L. HECATHORN during his years of service to the District; and

WHEREAS, the Directors of this District have determined to create such a commemoration by naming the new Turbidity Reduction Facility at Korblex in honor of LLOYD L. HECATHORN:

NOW, THEREFORE, BE IT RESOLVED, that the new Turbidity Reduction Facility at Korblex be known and designated as the LLOYD L. HECATHORN TURBIDITY REDUCTION FACILITY on and after the date of this Resolution, and that a suitable plaque be affixed to the facility so designating it; and

BE IT FURTHER RESOLVED, that a copy of this Resolution be presented to LLOYD L. HECATHORN as an expression of appreciation from the Board and staff of the HUMBOLDT BAY MUNICIPAL WATER DISTRICT whom he has served for over 22 years.

PASSED, APPROVED AND ADOPTED this 10th day of July, 2003, by the following roll call vote:

AYES:	Directors Cole, Cooney, Hecathorn, Hunt and Rupp
NAYES:	None
ABSENT:	None

_____
Vern M. Cooney, President of the Board of Directors
of the Humboldt Bay Municipal Water District

ATTEST:

_____
Harold C. Hunt, Vice-President of the Board of Directors
of the Humboldt Bay Municipal Water District

RESOLUTION NO. 2019-20

Resolution of the Humboldt Bay Municipal Water District Recognizing and Honoring the Outstanding Service of *Barbara Hecathorn*

WHEREAS, Barbara Hecathorn has served the Humboldt Bay Municipal Water District with distinction, as Director of Division Three, from August 2005 to December 31, 2019; and,

WHEREAS, at least twenty years prior to her service as Director, she had a strong interest in the activities of the District and accompanied her husband, Director Lloyd Hecathorn to numerous meetings and ACWA Conferences and attended many seminars on the complex water needs of California; and

WHEREAS, her service has included President from January 2015 to January 2017; Vice-President from January 2013 to January 2015 and Secretary/Treasurer from January 2009 to January 2013; and,

WHEREAS, she served the District in many ways beyond the normal duties of a Director, including serving on the Joint Agency Aquatic Invasive Species Committee, the Audit Committee, the Ad Hoc Committee for Negotiating Wholesale Contracts; and,

WHEREAS, she represented the District and the North Coast region in general during her service on the Association of California Water Agencies Region 1 Board; and,

WHEREAS, she represented District for a number of years as the Redwood Coast Energy Authority representative; and,

WHEREAS, to each meeting, she always brought her chic fashion sense; and,

WHEREAS, she has the unique ability to diffuse tension with her wit and humor; and,

WHEREAS, the Board wishes to acknowledge her departure from the Board and does hereby wish her all the best,

NOW, THEREFORE BE IT RESOLVED, that the Board and Staff of the Humboldt Bay Municipal Water District does hereby sincerely and gratefully acknowledge Barbara Hecathorn's contributions and years of dedicated service.

BE IT FURTHER RESOLVED, that the Board and Staff of the Humboldt Bay Municipal Water District thank Barbara Hecathorn, for the years of service she contributed to the District and the Humboldt Bay Community.

PASSED, APPROVED AND ADOPTED this 12th day of December 2019, by the following roll call vote:

AYES:
NAYES:
ABSENT:

ATTEST:

Sheri Woo, President

J. Bruce Rupp, Secretary/Treasurer

Neal Latt, Vice-President

Michelle Fuller, Director

John Friedenbach, General Manager

SECTION I-2 PAGE NO. 4

California Department of
Fish and Wildlife

CDFW News

TAG: FOOTHILL YELLOW-LEGGED FROG

California Fish and Game Commission Meets in Sacramento

December 12, 2019by kmacinty, posted in big game, California Endangered Species Act, Environmental Science, Fisheries, Fishing (Sport), Habitat Conservation, Hunting, Marine, Public comment period, Public Participation, Regulations, waterfowl, Wildlife, wildlife protection

At its December 2019 meeting in Sacramento, the California Fish and Game Commission took action on a number of issues affecting California's natural resources. The following are just a few items of interest from the two-day meeting.

The Commission made a listing decision under the California Endangered Species Act (CESA) regarding the foothill yellow-legged frog. Due to the level of genetic divergence, geographic isolation, and differing levels of imperilment between populations and threats within these populations, the California Department of Fish and Wildlife (CDFW) recommended separating the listing into different clades for the foothill yellow-legged frog. The Commission's decision was consistent with that recommendation. The Commission listed the Southern Sierra, Central Coast and South Coast clades as endangered under CESA, and the Feather River and Northern Sierra clades as threatened under CESA. The Commission also decided that listing the North Coast clade is not warranted at this time. The Commission is scheduled to adopt findings for the decision at its February 2020 meeting.

The Commission recognized five newly inducted members of the *California Waterfowler's Hall of Fame.* This year's inductees are L. Ryan Broddrick, Dean A. Cortopassi, John M. Eadie, Richard Janson and Mickey W. Saso. The California Waterfowler's Hall of Fame was established in 2006 to recognize those individuals who have made significant contributions to enhancing waterfowl and their habitats in California.

After hearing from numerous Delta anglers, the Commission voted to postpone adoption of a Delta Fisheries Management Policy and potential amendments to the Commission's Striped Bass Policy to a future meeting.

Successful and sound management of game populations has allowed for the Commission to authorize publication of notice to amend hunting regulations for big game mammals and waterfowl. Amendments to be considered include additional hunting opportunities in some

elk and desert bighorn sheep zones where populations continue to thrive, and new hunting opportunities for veterans and active military personnel for waterfowl hunting.

The Commission authorized publication of notice to amend the regulations for CDFW lands to add properties to the lists of wildlife areas and ecological reserves, and to remove properties from those lists for which CDFW no longer has management authority. This focused regulatory package also proposes authorization of new site-specific public uses, as well as other amendments to address operational or public safety concerns.

The Commission received an annual report from CDFW on management activities of the Statewide Marine Protected Area Program and heard other marine-related items.

The Commission also elected to move the dates of the next meeting to Feb. 20-21, 2020 with marine items being heard on the first day and wildlife items on the second day.

Commission President Eric Sklar, Vice President Jacque Hostler-Carmesin and Commissioner Samantha Murray were present. Commissioners Russell Burns and Peter Silva were absent.

The full Commission agenda for this meeting along with supporting information is available at **www.fgc.ca.gov**. An archived video will also be available in coming days.

Dams Within Jurisdiction of the State of California

Dams Listed Alphabetically

By County

September 2019

Photo used with permission from the City and County of San Francisco

DSOD – Data Definitions – Page ii

Downstream Hazard

The downstream hazard is based solely on potential downstream impacts to life and property should the dam fail when operating with a full reservoir. This hazard is not related to the condition of the dam or its appurtenant structures. The definitions for downstream hazard are borrowed from the Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (FEMA P-946, July 2013). FEMA categorizes the downstream hazard potential into three categories in increasing severity: Low, Significant, and High. DSOD adds a fourth category of "Extremely High."

Downstream Hazard Potential Classification	Potential Downstream Impacts to Life and Property
Low	No probable loss of human life and low economic and environmental losses. Losses are expected to be principally limited to the owner's property.
Significant	No probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
High	Expected to cause loss of at least one human life.
Extremely High	Expected to cause loss of at least one human life and one of the following: result in an inundation area with a population of 1,000 or more; or, result in the inundation of facilities or infrastructure, the inundation of which poses a significant threat to public safety as determined by the department on a case-by-case basis.

Condition Assessment

California DSOD uses NID's condition rating definitions, with additional criteria, as a guideline in assigning condition assessments.

Rating	National Inventory of Dams Definitions	California DSOD Additional Criteria
Satisfactory	No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines	None
Fair	No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action	• Dam has a long-standing deficiency that is not being addressed in a timely manner • Dam is not certified and its safety is under evaluation • Dam is restricted and operation of the reservoir at the lower level does not mitigate the deficiency
Poor	A dam safety deficiency is recognized for loading conditions that may realistically occur. Remedial action is necessary. A poor rating may also be used when uncertainties exist as to critical analysis parameters that identify a potential dam safety deficiency. Further investigations and studies are necessary	Dam has multiple deficiencies or a significant deficiency that requires extensive remedial work
Unsatisfactory	A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution	None
Not Rated	The dam has not been inspected, is not under State jurisdiction, or has been inspected but, for whatever reason, has not been rated	None

Reservoir Restrictions

DSOD may direct or order an owner to operate the reservoir to a specified water surface elevation level that is lower than the maximum storage level. In addition, owners may self-impose a restriction as a result of an owner-initiated study that identifies a dam safety issue. Reservoir restrictions are typically imposed for deficiencies of the dam, spillway, low-level outlet, or other appurtenances with respect to dam safety.

Trinity

Jurisdictional Dams

Listed Alphabetically by County

Dam Number	Dam Name		Owner Name	Dam Height	Reservoir Capacity	Certified Status	Condition Assessment	County
National ID No.	Latitude	Longitude	Owner Type	Crest Length	Dam Type	Downstream Hazard	Reservoir Restrictions	Year Built
1072-0	Ewing		Trinity County Waterworks District 1	63	887	Certified	Satisfactory	Trinity
CA00903	40.56	-123.17	County, county agency, or county district	550	ERRK	Significant	No	1972
219-0	Jones Ranch		Private Entity	36	58	Certified	Satisfactory	Trinity
CA01258	40.80	-123.49	Individual owner	350	ERTH	Significant	No	1980
1013-0	Robert W Matthews		Humboldt Bay Municipal Water District	150	51,800	Certified	Satisfactory	Trinity
CA00833	40.37	-123.43	Park, sanitation, utility, or water district	630	ERTH	High	No	1962

Count: 3

State High Risk

The California State Auditor's Updated Assessment of High-Risk Issues Faced by the State and Select State Agencies

January 2020

REPORT 2019-601

HIGH RISK

CALIFORNIA STATE AUDITOR
621 Capitol Mall, Suite 1200 | Sacramento | CA | 95814

916.445.0255 | TTY 916.445.0033

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For questions regarding the contents of this report, please contact Margarita Fernández, Chief of Public Affairs, *at* 916.445.0255

Elaine M. Howle *State Auditor*

January 30, 2020
2019-601

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

As required by Chapter 251, Statutes of 2004, my office presents this report about issues and selected state agencies that represent a high risk to the State or its residents. Our work to systematically identify and address such high-risk issues aims to enhance efficiency and effectiveness by focusing the State's resources on improving the delivery of services related to important programs or functions.

In this report, we explain why we have added the State's financial reporting and accountability to the high risk list: the State's project to modernize its financial infrastructure through implementation of the Financial Information System for California (FI$Cal) has nearly doubled its expected costs since 2012 to more than $1 billion, and it will not deliver key features before the project officially concludes its development stage at the end of June 2020. Further, since numerous state entities began implementing FI$Cal, they have struggled to submit timely data for the State's annual financial statements, an issue that could ultimately negatively affect the State's credit rating.

The State continues to face seven high-risk issues that include aspects of water infrastructure, information technology oversight, and information security. We also concluded that four state agencies continue to meet our criteria for high risk: the California Department of Corrections and Rehabilitation, the California Department of Health Care Services, the California Department of Public Health, and the California State Teachers' Retirement System. Finally, we removed Covered California and the State's workforce and succession planning from our high risk list because the responsible agencies have demonstrated significant progress toward controlling risk factors.

We will continue to monitor the risks we have identified in this report and the actions the State takes to address them. When the State's actions result in significant progress toward resolving or mitigating such risks, we will remove the high risk designation based on our professional judgment.

Respectfully submitted,

Elaine M. Howle

ELAINE M. HOWLE, CPA
California State Auditor

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continued on next page . . .

CHAPTER 2

Infrastructure and Project Management

WATER INFRASTRUCTURE REMAINS A HIGH-RISK ISSUE BECAUSE OF ONGOING EFFORTS TO IMPROVE EMERGENCY PLANNING FOR DAMS, AND BECAUSE THE STATE'S LONG-TERM WATER SUPPLY REMAINS UNCERTAIN

Aging water infrastructure within the State continues to threaten public safety. Specifically, inadequately maintained dams or those not meeting standards, especially those whose failure could affect large populations, pose significant risks to California residents. For example, the 2017 near-failure of the spillway of the largest-capacity dam under the State's direct jurisdiction, the Oroville Dam, required the evacuation of more than 180,000 people living along the Feather River. Since that time, the Department of Water Resources (Water Resources) has completed reconstruction of the Oroville Dam spillway. However, Water Resources data indicate that a majority of dams within the State with less-than-satisfactory condition ratings are in areas where they pose downstream hazard potential (hazard risk) to life or property. Further, the California Governor's Office of Emergency Services (Emergency Services) and Water Resources have not yet fully ensured the utilization of precautionary measures meant to prepare dam owners and local entities for potential dam failures. As a result of these concerns, water infrastructure remains a high-risk issue.

In addition to concerns related to dam safety, the State's ability to maintain reliable access to water remains a critical component of the overall risks to its water infrastructure. California has attempted to address water infrastructure and supply problems for more than a decade. However, recent developments have significantly altered its proposed solution. In 2019 the California State WaterFix Project (WaterFix)—the State's dual-tunnel project to improve water availability—transitioned to a one-tunnel solution, referred to as the Delta Conveyance project. Because this project is still in its initial stages, we will continue to monitor its implementation.

Background

State law vests Water Resources with authority over dams within the State's jurisdiction, which it oversees through its Division of Safety of Dams (Dam Safety Division). The Dam Safety Division inspects more than 1,200 dams throughout the State that Water Resources monitors, assigning them condition ratings and

Water Resources' Dam Condition Ratings

- **Satisfactory:** No existing or potential dam safety deficiencies and acceptable performance is expected under all conditions.
- **Fair:** No existing dam safety deficiencies for normal conditions. However, extreme hydrologic and/or seismic events may result in a safety deficiency and further action may be necessary, or dam is not certified and its safety is under evaluation.
- **Poor:** Existing dam safety deficiency for conditions that may realistically occur and remedial action is necessary.
- **Unsatisfactory:** Existing safety deficiency that requires immediate or emergency remedial action.

Water Resources' Hazard Risk Classifications*

- **Low:** No probable loss of human life and low economic and environmental losses generally limited to the owner's property.
- **Significant:** No probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant effects.
- **High:** Expected to cause loss of at least one human life.
- **Extremely High:** Expected to cause considerable loss of human life or result in inundation of an area with a population of 1,000 or more people or of critical infrastructure.

Source: Water Resources' Dam Safety Division.

* The hazard risk indicates potential impacts to life and property downstream of a dam should it fail when operating with a full reservoir.

identifying the hazard risk for each, as the text box illustrates. A dam's hazard risk classification indicates the potential consequence of a failure. For example, Lower Blue Lake Dam in Alpine County is rated in fair condition with a significant hazard risk. Following events at the Oroville Dam in 2017, the Legislature amended state law to require that regulated owners of dams with certain hazard risk classifications develop emergency action plans (emergency plan) to address potential flood emergencies.[2] State law requires that emergency plans include inundation maps—that Water Resources must review and approve—detailing potential flooding under different scenarios. Once Water Resources has approved the inundation maps, dam owners must submit an emergency plan to Emergency Services for review and approval. Emergency plans specify actions to minimize loss of life and property damage in various emergency conditions.

In addition, significant cost increases and delays in the WaterFix project contributed to our designation of water infrastructure as a high-risk issue. Although the State has developed extensive infrastructure to ensure that its residents have access to ready supplies of water, an integral component of the system is a network of engineered channels and agricultural lowlands at the confluence of the Sacramento and San Joaquin rivers. This network is called the Delta. The State Water Project supplies water through the Delta to more than 27 million people and to farmland for irrigation. Water Resources and its partner agencies intended for WaterFix to address concerns about the negative impacts—particularly on endangered species—of exporting water through pumps in the Delta for use by local water agencies. These concerns prompted regulators to reduce the availability of water exports from the Delta, which detrimentally affected certain communities and farms. WaterFix proposed to create new facilities to transfer water from the Sacramento River through two tunnels to improve water supply reliability and quality, as well as conserve wildlife in the Delta. However, WaterFix faced significant cost increases and legal challenges. In 2019 the Governor directed state agencies to study an alternative solution. As a result, the State transitioned to a new single-tunnel project.

[2] Regulated owners can include state agencies, local governments, and private owners.

Aging Water Infrastructure in the State Continues to Pose a Significant Risk to California Residents

The condition of some of the State's most potentially hazardous dams remains an issue of concern for the State. We noted concerns in our 2018 high-risk report regarding the age and condition of dams within the State. As of October 2019, Water Resources data indicate that 102 dams in the State had less-than-satisfactory condition ratings of *fair*, *poor*, or *unsatisfactory*. Of those, 84 had hazard classifications of *significant* or above, indicating risk to life or property should the dams fail. State law requires dam owners to correct deficiencies that Water Resources identifies constituting a danger to life or property, yet funding such repairs is challenging. According to Water Resources, there are no state-level programs that provide financial assistance to dam owners for repairing their dams and resolving deficiencies. Until an avenue of funding becomes available to facilitate repairs and improvements to high-risk dams, the water infrastructure in the State will continue to pose a significant risk.

Water Resources data indicate that 102 dams in the State had less-than-satisfactory condition ratings, and, of those, 84 had hazard classifications indicating risk to life or property should the dams fail.

Further, Emergency Services and Water Resources have been slow to ensure the completion of emergency action planning meant to prepare dam owners and local entities for potential dam failures. As we explain previously, state law required owners of certain dams to submit emergency plans, which must include approved inundation maps, to Emergency Services. The law required owners of dams classified as *extremely high hazard risk* to submit emergency plans by January 1, 2018, and owners of dams classified as *high hazard risk* to submit their emergency plans by January 1, 2019. Water Resources is responsible for approving inundation maps, while Emergency Services approves the emergency plans. As Figure 4 shows, of the State's nearly 650 dams classified as *high hazard risk* or *extremely high hazard risk*, Water Resources was in the process of reviewing maps for 285 dams, and had approved maps for 310 dams, as of November 2019. Of greater concern, Emergency Services had approved only 22 of the about 400 emergency plans it had received from dam owners as of November 2019. Emergency Services indicated that this delay is primarily because it has had to return plans to dam owners for revision. Nearly 150 of the plans it had returned remain outstanding.

State law does not require dam owners to resubmit plans within a defined period, and Emergency Services has stated it does not favor specifying a deadline because additional time is sometimes necessary to educate and conduct outreach to dam owners. This stance is concerning given that Emergency Services has currently approved only 5 percent of the approximately 400 plans it has received. Further, state law requires dam owners to submit plans for dams classified as *significant hazard risk* to Emergency Services before

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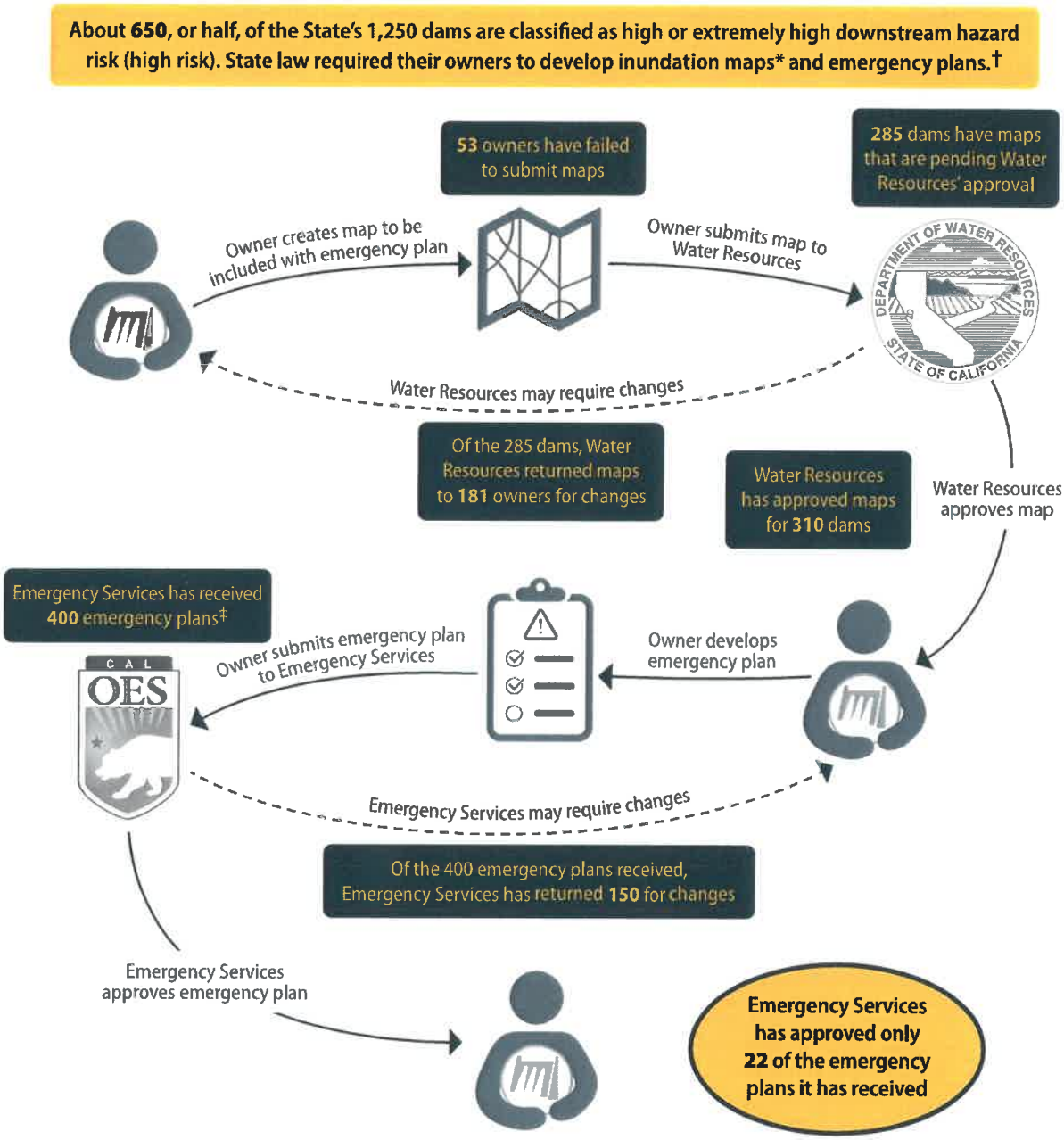
Figure 4
The Vast Majority of High-Risk Dams Still Do Not Have Approved Emergency Plans



Source: State law and interviews with Water Resources' and Emergency Services' staff.

Notes: The numbers we present in this figure are based on data provided by Water Resources' and Emergency Services' staff. Because of differences in how each agency characterizes the status of maps and plans, we have slightly adjusted a few of the numbers to account for the various actions depicted in the figure that are performed by the owners and the two agencies and to reconcile the quantities of such activities.

Data is current as of November 2019.

* *Inundation maps* identify critical infrastructure and areas in which populations require protective measures, warnings, or evacuation planning. State law requires Water Resources to process and approve maps submitted by dam owners.

† *Emergency plans* identify potential emergency conditions and specify actions to minimize loss of life and property damage. Emergency Services reviews and approves emergency plans submitted by dam owners, which must include inundation maps.

‡ Total includes 154 emergency plans pending inundation maps.

January 2, 2021. This requirement will result in 250 additional plans Emergency Services will need to approve in addition to the plans currently outstanding. Emergency Services acknowledges that this group of dam owners may require even more attention and guidance. Unless Water Resources and Emergency Services take sufficient action to ensure that dam owners complete adequate emergency planning, the State will continue to have little assurance that its emergency responses to potential dam failures will be sufficient.

Unless Water Resources and Emergency Services take sufficient action to ensure that dam owners complete adequate emergency planning, the State will continue to have little assurance that its emergency responses to potential dam failures will be sufficient.

Existing efforts by Emergency Services and Water Resources are not sufficient to address the lack of approved plans. For example, despite spending an average of 500 days to process the 22 emergency plans it has approved to date, Emergency Services has not yet determined the number of staff it needs to process and approve the remaining plans. In the meantime, Emergency Services has sent letters to *high-* and *extremely high-hazard risk* dam owners that have not submitted emergency plans, directing them to do so. It also plans to provide education and outreach to dam owners to increase the quality of their submissions. However, although Emergency Services has indicated that dam owners who have submitted emergency plans are sometimes slow to respond to requests for revisions, it has not asked Water Resources, the agency with enforcement power, to take enforcement actions such as levying fines. Moreover, Water Resources has not yet approved inundation maps for 285 of nearly 600 dams, has returned maps to 181 owners for changes, and has not received significantly overdue submissions from 53 dam owners. Water Resources indicated that when it is aware of a safety issue, it has imposed restrictions on reservoirs to mitigate the risk. Nevertheless, the potentially catastrophic consequences of a dam failure, the significant number of dams in less than satisfactory condition, and the remaining work necessary to ensure that emergency planning is complete and approved lead us to conclude that water infrastructure remains a high-risk issue.

Further, the effect on the State's water supply of the State's proposed new single-tunnel replacement to WaterFix remains unknown. Implementation of a plan to transfer water from the Sacramento River to California residents may benefit from work the State has completed in the 13 years since it first attempted to address water infrastructure and supply problems in the Delta through the Delta Habitat Conservation and Conveyance Program (conservation program), an effort that eventually became WaterFix. The conservation program evaluated multiple conservation and conveyance alternatives before selecting WaterFix. Water Resources has stated that the environmental review process for the new single-tunnel project may make use of such past studies and analyses. In addition to utilizing existing resources when available,

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Water Resources is currently developing a schedule for the various phases of the environmental review process, required documents, and opportunities for public comment necessary to implement the new plan. We will continue to monitor the eventual effect of a one-tunnel project on the State's water infrastructure.

Agency Comments

Natural Resources and Water Resources issued a joint response, in which they agreed that dam safety and water reliability are profoundly important to the State. They indicated that Water Resources is updating its dam safety inspection protocols and dedicating additional staff to its dam safety program. Additionally, they stated that Water Resources has taken an aggressive approach to evaluating dams for seismic risk and is approving inundation maps. They noted that Water Resources has the authority to impose restrictions on dam owners to mitigate safety risks until issues are remediated and that the approval of inundation maps involves significant engagement with dam owners. Further, they stated that Water Resources has imposed restrictions on reservoir levels on 41 dams under its jurisdiction. Finally, they noted that Water Resources is making progress on the single-tunnel Delta conveyance project. We appreciate that Water Resources is making progress in addressing dam safety and water infrastructure. Nevertheless, for the reasons we note, this remains a high-risk issue. Water Resources also offered a number of textual edits. We reviewed the suggestions and incorporated them when, in our professional judgment, they provided necessary corrections, context, or clarification.

Emergency Services did not indicate whether it agreed or disagreed with our conclusion that water infrastructure is a high-risk issue. Instead Emergency Services noted that it believed we minimized the work that it has accomplished implementing legislation related to dam safety. Emergency Services further stated that extensive interactive planning work has been underway to ensure that dam owners submit quality emergency plans. It also emphasized that dam owners are responsible for most of the delay in finalizing emergency plans. We do not dispute that Emergency Services has made progress in addressing the issues surrounding dam safety; nevertheless, the large number of outstanding emergency plans leads us to retain the issue of water infrastructure on our high-risk list. Emergency Services also raised concerns about how we characterized some of its activities in the report. We reviewed Emergency Services' concerns and addressed them through edits when, in our professional judgment, they improved the accuracy or clarity of our text.

Samoa Peninsula Infrastructure Workgroup Agreement

The undersigned agree to form a workgroup to determine whether a public and /or private entity should be formed to collectively gather resources to invest into the infrastructure needs of the Samoa Peninsula.

Recitals

A. Public agencies with a variety of jurisdictions have been engaged in conversations and activity concerning numerous potential coastal dependent or aquaculture-based development opportunities for the Samoa Peninsula.

B. Currently, a substantial lack or limitation exists on the utility related infrastructure on the Samoa Peninsula needed for both economic development and the safety of future residents.

C. The Samoa Peninsula falls into a congressionally established Opportunity Zone. Opportunity Zones are a new tool for community development. Established in the Tax Cuts and Jobs Act of 2017, Opportunity Zones provide tax incentives for long-term investment in low-income communities.

D. Interested agencies desire to create a workgroup, to determine the best way stakeholders can collaborate to attract private investment, federal or state funding to meet the infrastructure needs of the Samoa Peninsula.

Now, therefore the undersigned public agencies, referred herein as "Members" agree as follows:

Agreement

1. **Formation.** The "Samoa Peninsula Infrastructure Workgroup" is hereby formed.

2. Parties to this agreement. For the purposes of this agreement, each member intends to explore the most beneficial mechanism for obtaining funding to improve infrastructure on the Samoa Peninsula which may include the creation of a separate public entity or special district for a period of no more than one year.

3. Purpose. The purpose is to explore potential funding opportunities to create and/or improve existing infrastructure on the Samoa Peninsula which may include the possibility

of creating an entity that can seek resources for the infrastructure needs of the Samoa Peninsula for economic development improvements and the betterment of the community members who live there and the economy of Humboldt County. To further that purpose, the membership will work toward the following goals:

A. Study the collective infrastructure needs including, but not limited to: water, sewer, power, fire, broadband
B. Create an overview on upcoming projects, their funding status, and additional projects likely to emerge seeking to locate in the region.
C. Increase awareness and understanding of the regional capacity needed to protect the area from threats including fire, safety and climate adaptation.
D. Expand the regional capacity to be responsive to economic development opportunities

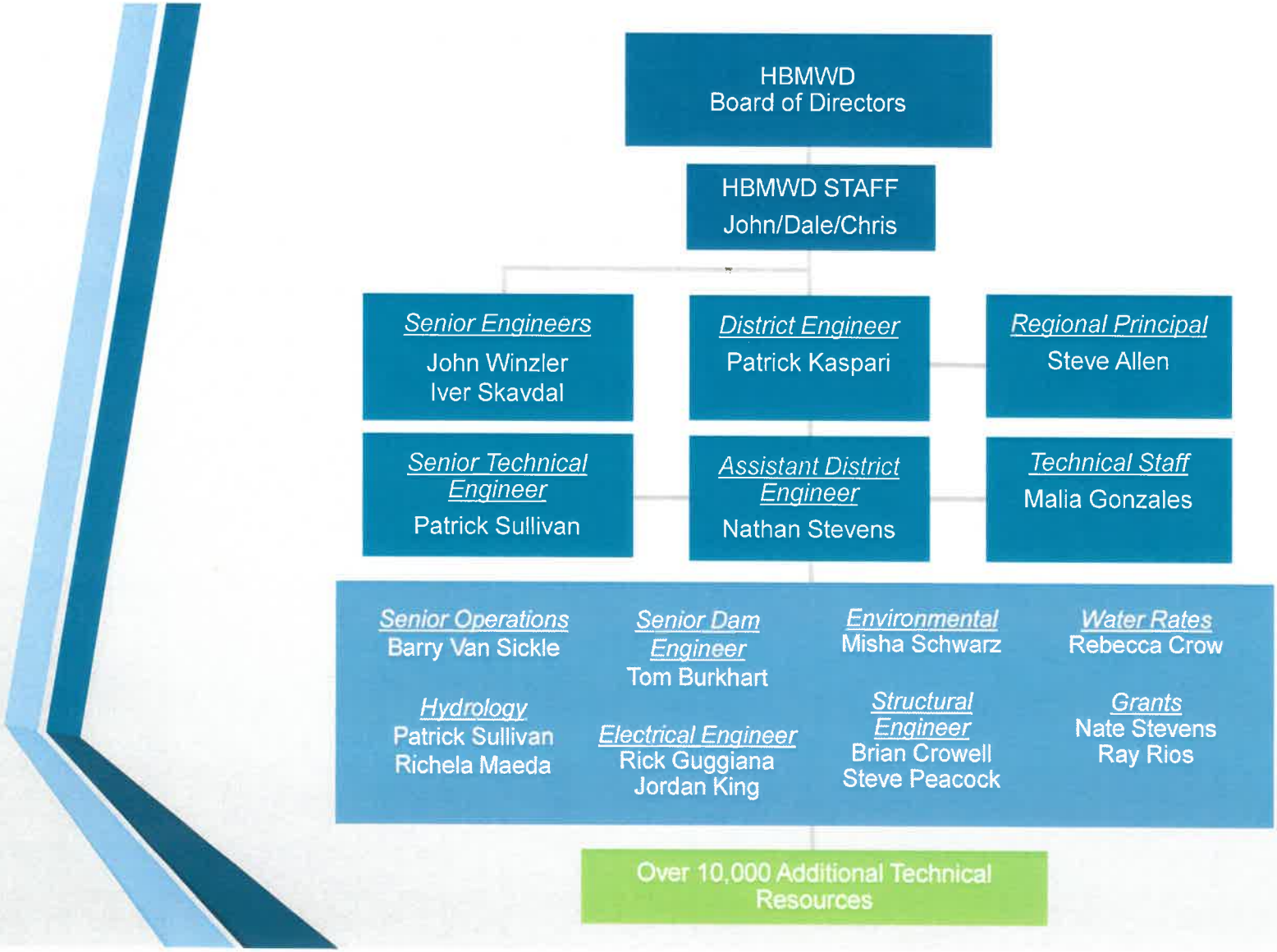
4. Membership. Any public agency which has jurisdiction within the boundaries of the Samoa Peninsula Opportunity Zone.

5. Timeline. The workgroup shall disband on December 31, 2020, or sooner at the discretion of the membership. The Workgroup can be extended for a period of one year by the membership if the entities it represents are notified of the need for an extension.

6. Principal Office. The principal office shall be 520 E Street, Eureka, CA 95501

7. Staffing. The County of Humboldt Economic Development Department will staff the Workgroup. Consultants may be hired to assist the County with staffing needs.

Engineering



SECTION J1a PAGE NO. 1

CHANGE ORDER

PROJECT: HBMWD 12 kV Switchgear Relocation

Change Order No.: 1
Date: 1/10/2020
Page No.: 1 of 1

DESCRIPTION OF CHANGE:

The Base Bid Schedule included Line Item 10 (Security Fence and Gates). However, HBMWD has decided that higher security fencing and gates are desired for the site. The purpose of this change order is to award Additive Bid Item A-1 (Higher Security Fence and Gates) to Sequoia. The additive design measures for a higher security fence and gate are described in Note 4 on the Security Fence and Gate Detail on Sheet C-501. As described in the Bid Requirements, if awarded, Item A-1 in the Additive Bid Schedule would replace Item 10 in the Base Bid Schedule. Sequoia's total cost for Base Bid Item 10 was $27,025. Sequoia's total cost for Additive Bid Item A-1 was $50,290. Therefore, the total incremental cost for this change order is as follows:

$50,290 - $27,025 = $23,265

CONTRACTOR: Sequoia Construction Specialties

Adjustment of contract sum	
Original Contract Sum	$2,448,063
Prior Adjustments	$0
Contract Sum Prior to this Change	$2,448,063
Adjustment for this Change	$23,265
Revised Contract Sum	$2,471,328

Adjustment of contract completion dates	
Original Contract Completion Date	Nov. 26, 2020
Prior Adjustments in Calendar Days	0
Adjustment in Calendar Days for this Change Order	0
Revised Contract Completion Date	Nov. 26, 2020

NOTE: CONTRACTOR WAIVES ANY CLAIM FOR FURTHER ADJUSTMENTS FOR THE CONTRACT SUM RELATED TO THE ABOVE-DESCRIBED CHANGE IN THE WORK.

RECOMMENDED BY:

Engineer – Nathan Stevens — DATE: 1/10/2020

APPROVED BY:

Owner – John Friedenbach, General Manager — DATE: 1/10/2020

ACCEPTED BY:

Contractor – Brian Pritchard, President — DATE: 1/23/2020

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET, PO BOX 95 • EUREKA, CALIFORNIA 95502-0095

OFFICE 707-443-5018 ESSEX 707-822-2918

FAX 707-443-5731 707-822-8245

EMAIL OFFICE@HBMWD.COM

Website: www.hbmwd.com

February 6, 2020

Ms. Concepcion Chavez, Hazard Mitigation Specialist
California Office of Emergency Services
3650 Schriever Avenue
Mather, CA 95655-4203

Subject: **HMGP #4240-PJ0017**
Updated - Additional Grant Funds Request for
Humboldt Bay Municipal Water District 12kV Switchgear Relocation

Dear Ms. Chavez,

The Humboldt Bay Municipal Water District (HBMWD) respectfully requests an increase in grant funding for the completion of the HBMWD's 12-kV Switchgear Relocation Project (12kV Project) referenced above. Bids were solicited for this project and five bids were received on December 10, 2019 (see attached Bid Tabulation for details of each bid). The lowest responsible, responsive bid received was from Sequoia Construction Specialties in the amount of $2,471,328. Unfortunately, this is $1,096,328 over the construction portion of the original grant amount (see attached original cost estimate with actual bid amounts added). The overall scope of the project has not changed. The increase in costs are due to several factors, with the most pertinent being that the completion of the design identified additional components that are required but were not included in the original grant cost estimate. In addition, we discovered an oversight whereby we had not included the railroad authority site access license cost of $60,000. **Just this week, we were informed by PG&E that they will be assessing our project a $100,000 permit fee to process our 12kV Switchgear Relocation Project. This is an unforeseen and unbudgeted permit fee amount for our project. Therefore, we are respectfully seeking additional project cost funding approval in the amount of $1,256,328 (1,096,328 + 60,000 + 100,000).**

We have also updated the original Benefit Cost Analysis to add the actual project cost of $2,923,328 (1,767,000 + 1,156,328 + 100,000) vs the original project cost estimate of $1,767,000. The revised BCA is 2.11. We have also attached a copy of the zipped BCA. Despite the increased project cost, the BCA reflects the importance of this project. The relocation of the switchgear out of the flood zone will help ensure that potable water can still be provided to over 88,000 customers in the Humboldt Bay area in the event of a major flood or dam break on the Mad River.

We greatly appreciate your assistance in this matter. If you have any questions, or require any additional information, please do not hesitate to contact us.

Sincerely,

John Friedenbach
General Manager

cc: Patrick Kaspari, GHD

Total Benefits: **$6,457,615** Total Costs: **$3,053,358** BCR: **2.11**

Project Number: 16-0003 Disaster #: Program: PDM Agency: **Humboldt Bay Municipal Water District**

State: **California** Point of Contact: John Friedenbach Analyst: Nathan Stevens

Project Summary:

Project Number:	16-0003	Disaster #:	
Program:	PDM	Agency:	Humboldt Bay Municipal Water District
Analyst:	Nathan Stevens	Discount Rate:	0.070
Point of Contact:	John Friedenbach	Phone Number:	(707) 443-5018
Address:	PO Box 95, Eureka, California, 95502		
Email:	friedenbach@hbmwd.com		
Comments:			

Structure Summary For:

12-kV Switchgear, 7270 West End Rd, Arcata, California, 95521, Humboldt

Structure Type: Utility Historic Building: No Contact: Pat Kaspari

Benefits: $6,457,615 Costs: $3,053,358 BCR: 2.11

Mitigation	Hazard	BCR	Benefits	Costs
Other flood proofing measures	Damage-Frequency Assessment	2.11	$6,457,615	$3,053,358

Total Benefits: **$6,457,615** Total Costs: **$3,053,358** BCR: **2.11**

Project Number: 16-0003 Disaster #: Program: PDM Agency: **Humboldt Bay Municipal Water District**

State: **California** Point of Contact: John Friedenbach Analyst: Nathan Stevens

Structure and Mitigation Details For: 12-kV Switchgear, 7270 West End Rd, Arcata, California, 95521, Humboldt

Benefits: $6,457,615 Costs: $3,053,358 BCR: 2.11

Hazard: **Damage-Frequency Assessment - Flood**

Mitigation Option: Other flood proofing measures

Latitude: Longitude: Project Useful Life: 30

Mitigation Information

Basis of Damages: Expected Damages

Number of Damage Events: 2

Number of Events with Know Recurrence Intervals: 2

Utilities

Type of Service: Potable Water

Other:

Number of Customers: Served: 80,000

Value per Unit of Service: 103.00

Total Value of Service per Day: $8,240,000

Facility Description:

See attached.

Total Benefits: **$6,457,615** Total Costs: **$3,053,358** BCR: **2.11**

Project Number: 16-0003 Disaster #: Program: PDM Agency: **Humboldt Bay Municipal Water District**

State: **California** Point of Contact: John Friedenbach Analyst: Nathan Stevens

Expected Damages Before and After Mitigation

Analysis Year: 2016 Analysis Duration: 56 Utilities ($/day): $8,240,000.00

Year Built: 1961 User Input Analysis Duration: Buildings ($/day):

Roads/Bridges ($/day):

Damages Before Mitigation

Damages After Mitigation

RI: 9999.00
Are Damages In Current Dollars? Yes
Buildings (Days):
Utilities (Days): 0.0
Roads (Days):

Total	$0

RI: 9999.00
Are Damages In Current Dollars? Yes
Buildings (Days):
Utilities (Days): 0.0
Roads (Days):

Total	$0

Total Benefits: **$6,457,615** Total Costs: **$3,053,358** BCR: **2.11**

Project Number: 16-0003 Disaster #: Program: PDM Agency: **Humboldt Bay Municipal Water District**

State: **California** Point of Contact: John Friedenbach Analyst: Nathan Stevens

Damage Year:
RI: 475.00
Are Damages In Current Dollars? Yes

Buildings (Days):
Utilities (Days): 30.0
Roads (Days):

Total	$247,200,000
Total Inflated	

Volunteers Cost

Number of Volunteers Required:
Cost of Volunteers Time ($/Hour/Person):
Per-Person Cost of Lodging for a Volunteer:
Number of Hours Volunteered/Person:
Number of Days Lodging/Volunteer:
Cost of Volunteers:

Damage Year:
RI: 2000.00
Are Damages In Current Dollars? Yes

Buildings (Days):
Utilities (Days): 30.0
Roads (Days):

Total	$247,200,000
Total Inflated	

Volunteers Cost

Number of Volunteers Required:
Cost of Volunteers Time ($/Hour/Person):
Per-Person Cost of Lodging for a Volunteer:
Number of Hours Volunteered/Person:
Number of Days Lodging/Volunteer:
Cost of Volunteers:

Social Benefits

Mental Stress and Anxiety **Lost Productivity**

Total Benefits: **$6,457,615** Total Costs: **$3,053,358** BCR: **2.11**

Project Number: 16-0003 Disaster #: Program: PDM Agency: **Humboldt Bay Municipal Water District**

State: **California** Point of Contact: John Friedenbach Analyst: Nathan Stevens

Number of Person:	0	Number of Worker:	0
Treatment Costs per person:	$2,443.00	Productivity Loss per person:	$8,736.00
Total Mental Stress and Anxiety Cost:	$0.00	Total Lost Productivity Cost:	$0.00

BCR Calculation Results

Expected Annual Damages Before Mitigation		Expected Annual Damages After Mitigation		Expected Avoided Damages After Mitigation (Benefits)	
Annual:	$520,396	Annual:	$0	Annual:	$520,396
Present Value:	$6,457,615	Present Value:	$0	Present Value:	$6,457,615

Mitigation Benefits:	$6,457,615	Mitigation Costs:	$3,053,358
Benefits Minus Costs:	$3,404,257	Benefit-Cost Ratio:	2.11

Cost Estimate

Project Useful Life (years):	30	Construction Type:	
Mitigation Project Cost:	$3,023,328	Detailed Scope of Work:	Yes
Annual Project Maintenance Cost:	$2,420	Detailed Estimate for Entire Project:	Yes
Final Mitigation Project Cost:	$3,053,358	Years of Maintenance:	30
Cost Basis Year:		Present Worth of Annual Maintenance Costs:	$30,030
Construction Start Year:		Estimate Reflects Current Prices:	Yes
Construction End Year:		Project Escalation:	

Justification/Attachments

Total Benefits: **$6,457,615** Total Costs: **$3,053,358** BCR: **2.11**

Project Number: 16-0003 Disaster #: Program: PDM Agency: **Humboldt Bay Municipal Water District**

State: **California** Point of Contact: John Friedenbach Analyst: Nathan Stevens

Field	Description	Attachments
Annual Project Maintenance Cost	Staff spends 32 hours per year (equals $800/year at $25/hr) inspecting/cleaning switchgear (monthly inspections and annual cleaning). A contractor is hired every two years to clean switchgear components for approximately $3,240 ($1,620/year).	12-kV Switchgear maintenance Contract 4-12-16.pdf
Expected damages before mitigation	Please see the attached "Narrative Justification of Damages".	Narrative Justification of Damages.pdf; FEMA Flood Insurance Study.PDF; HumCo HMP.PDF; Matthews Dam Seismic Update_012716_Final.pdf
Number of years of maintainance	Set equal to "Project Useful Life"	
Project useful life	Used the useful life given in the "How do I determine Project Useful Life?" guidelines for electrical cabinets (30 years) to determine the useful life of this switchgear project.	
Unknown Frequency - Damages after Mitigation	There are no expected damages after mitigation. The recurrence interval "9999" was used to fill in the blank only and has no significance. Please see the attached "Narrative Justification of Damages".	Narrative Justification of Damages.pdf
Year Built	The attached letter documents the year the system was constructed.	customer base.pdf

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January 7, 2020, Rev.1. January 21, 2020

Mr. John Friedenbach
Humboldt Bay Municipal Water District
P.O. Box 95
Eureka, CA 95502-0095

Ref: 11180211

Re: 2019 Domestic Water Pipeline Impressed Current Cathodic Protection (ICCP) System Evaluation

Dear John,

GHD respectfully submits this summary to the Humboldt Bay Municipal Water District (HBMWD) of the testing and assessment of the existing Impressed Current Cathodic Protection (ICCP) System associated with HBMWD's Domestic Water (DW) Pipelines. The project arose out of the budgeting for the replacement of the 299 Anode Bed scheduled in the CIP for the 2019 and 2020 fiscal years. The project approach, developed collaboratively between GHD and HBMWD, was based on the following project objectives include: 1) determine if cathodic protection is presently achieved on the subject water pipelines and/or can be achieved based on adjustment of existing ICCP system infrastructure operating parameters; 2) provide adjustment of existing ICCP system operating parameters if and as applicable; 3) provide an Engineer's analysis of the ICCP system infrastructure fitness for continued service and estimate of remaining useful service life; and 4) develop recommendations for ICCP system improvements, remediation or repairs in order to achieve cathodic protection in conformance with NACE SP0-100 if cathodic protection cannot be achieved with the existing ICCP system infrastructure.

Project Overview

Cathodic protection is a form of corrosion control commonly used to mitigate external corrosion on buried pipelines. Impressed Current Cathodic Protection (ICCP) is a type of cathodic protection relying on an external power source: AC power which is converted to DC by a rectifier. DC current is sourced through the soil via buried anodes to the project pipeline(s). There are typically several anodes associated with a single rectifier that may be buried in various configurations or arrays; including installation of multiple anodes in a vertical column as a part of a shallow anode well array or a deep anode well. HBMWD has an ICCP system dedicated to the DW pipelines; composed of five (5) rectifiers and associated anode beds. The CP system components are aging, and in some cases are estimated to have been in service for 30 or more years. The CP systems have been maintained by HBMWD staff and periodic system surveys have been conducted by a specialized Contractor retained by the District.

Introduction and Summary

The HBMWD Domestic Water Pipeline System is understood to be composed of reinforced concrete cylinder pipe (RCCP) comparable to AWWA C303 (concrete pressure pipe, reinforced with a steel cylinder that is

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helically wrapped with mild steel bar reinforcement) –type pipe installed in the 1960s. The following pipeline segment nomenclatures are applied to the noted pipeline segments:

Pipeline Segment G:	Pump Station #5 to the Filtered Water Reservoir
Pipeline Segment H:	TRF Reservoir to Flakeboard
Pipeline Segment I:	Janes Creek Rectifier to Spears Field
Pipeline Segment J:	Valve Pit #1 to Bay School Road
Pipeline Segment K:	Moxon Road to Jackson Ranch Slough
Pipeline Segment Truesdale:	Humboldt Bay to Truesdale Pump Station

The HBMWD Domestic Water Pipeline Cathodic Protection System is understood to be composed five (5) impressed current cathodic protection rectifiers. Each rectifier, with the exception of the Collector 3 Rectifier, provides current through sixteen (16) high silicon cast iron anodes; installed with two (2) anodes in each in eight (8) 25-foot deep anode wells in the vicinity of each rectifier location. The anode quantities and anode array geometry associated with the Collector 3 Rectifier are not know. The following cathodic protection system nomenclatures are applied to the noted CP system rectifiers:

Highway 299 Rectifier:	100 Volts, 42 Amps
Collector 3 Rectifier:	20 Volts, 5 Amps
Janes Creek Rectifier:	40 Volts, 42 Amps
Jackson Ranch Rectifier:	60 Volts, 40 Amps
Truesdale Rectifier:	30 Volts, 25 Amps

Approximate DW pipeline segment locations and rectifier locations are depicted in Attachment A. Initial project tasks included review of historical cathodic protection system survey reports and meetings with HBMWD staff. HBMWD staff noted that corrosion related degradation had been identified on various appurtenant pipeline connections. Typically, the appurtenant lines were noted to be dielectrically coated steel pipe or polyethylene encased ductile iron pipe.

Following document review, GHD performed testing of the cathodic system on various occasions between May 2019 and August 2019. The objective of the testing was to evaluate the effectiveness of the ICCP Systems in accordance with NACE International Criteria SP0100 "Cathodic Protection to Control External Corrosion of Concrete Pressure Pipelines and Mortar-Coated Steel Pipelines for Water or Waste Water Service", and to determine if the NACE Criteria could be achieved based on the existing cathodic protection system infrastructure and pipeline characteristics. The two (2) primary NACE International criteria for cathodic protection, paraphrased below from NACE SP0-100, are:

- -850 mVCSE Criterion: A negative polarized potential (Instant-Off) of at least negative 850 mV relative to a saturated copper-copper sulfate reference electrode.
- 100 mV Criterion: A minimum of 100 mV of cathodic polarization between the structure surface and a stable reference electrode contacting the electrolyte. This is a measurement of the difference between Depolarized (native) and Instant-Off potentials.

Application of the noted NACE 100 mV criteria requires measurement of native pipeline potentials. The criteria may be paraphrased as stating that cathodic protection is achieved if there is 100 mV or greater in the difference between the native potentials measured and the polarized (instant off) potentials measured at the same location. Native pipeline potentials are the pipeline potentials without any external source of DC current applied. Based on the known parameters regarding the pipeline type and age, the 100 mV criterion is in theory the best choice of the two applicable NACE criteria. The impressed current cathodic protection system survey was initiated with the objective of obtaining measurement of native (depolarized) pipeline-to-soil potentials. Potentials were measured at selected, accessible locations after all known sources of cathodic protection current (rectifiers) were de-energized for several weeks.

Following measurement of native potentials, all known rectifiers were re-energized, as possible, and the pipelines allowed to re-polarize for several weeks. Both the Jane's Creek Rectifier and Jackson Ranch Rectifiers were essentially non-functional throughout the duration of the assessment. Polarization may be conceptualized as the accumulation of negative electrical charge at the pipeline surface and is time dependent based on a number of factors including coating efficiency, pipeline diameter, distance from rectifier, resistance of the soil environment, and others. "On" potentials are reported with current sources remaining on. Measurement of polarized potentials involved momentary interruption of rectifiers for measurement "Instant Off" (polarized) potentials. Pipeline-to-soil potential measurements were obtained utilizing a calibrated high-impedance multi-meter and portable saturated copper-copper sulfate (Cu/CuSO4) reference electrode contacting the soil at available test stations.

Findings and Conclusions

The initial Native Potential Testing revealed a significant range in potentials measured with a number of significantly electronegative readings. The project rectifiers, with known electrical continuity to the DW pipelines, were confirmed to be de-energized. A number of "Bond Test Stations" were located at which electrical connection between HBMWD's DW and Industrial Water (IW) lines were established. Testing revealed that the Bond Test Stations were a source of DC current on the DW pipelines. Known pipeline bonds were removed and the DW lines were allowed additional time to de-polarize. Further testing revealed minimal electropositive shift which indicated that there are other locations of bonding between the DW and IW lines and/or that there are other direct or indirect sources of DC current to the DW lines.

Project rectifiers were re-energized and the DW pipelines were allowed several weeks to re-polarize. A Rectifier Assessment was performed at project rectifiers concurrently with measurement of "On" and Polarized pipe-to-soil potentials at nearby test stations, under a variety of rectifier tap settings to determine if the -850 mV polarized potential NACE criteria could be met. The Rectifier Assessments included assessment of rectifier functionality and assessment of gauge accuracy based on comparison of voltage (and current if applicable) read from the rectifier gauge and compared against readings obtained with a digital multi-meter. The total DC current output of the rectifier was calculated by measuring the DC voltage drop across the installed calibrated shunt.

The Highway 299 Rectifier was functioning at the time of assessment. However; a maximum DC output of approximately 3.4 Amps was measured corresponding to a voltage of 94.5 Volts. Based on review of historical rectifier data, a maximum amperage output of 3.5 Amps was achieved in 2010 corresponding to a

voltage of 80 Volts. The rectifier voltage may be adjusted by the user, but the DC current output is a factor of the total rectifier circuit resistance governed by Ohm's Law. The total rectifier circuit resistance is significantly affected by anode bed design. Anode shallow beds, such as the existing anode bed configurations, represent a much higher resistance factor than a deep anode well, and should be replaced with a deep anode well in order to significantly increase the DC current output of the rectifier installation. The existing anodes may be connected to the rectifier circuit along with the new deep well anodes as the existing anodes may continue to source (minimal) current and will not require abandonment. The existing rectifier may remain in place and be re-purposed to energize the deep anode well.

The Collector 3 Rectifier was functioning at the time of assessment. However; at tap setting of approximately 90%, a DC output of 0.67 Amps was measured corresponding to a voltage of 18.6 Volts. When system functionality is restored, DW pipelines in the vicinity of the Collector 3 Rectifier may be receive DC from other system rectifiers including the Highway 299 Rectifier. Although the Collector 3 Rectifier is operating at a nominal capacity in terms of DC current output, remediation in the form of additional anode installation is not presently recommended as it may not be necessary in consideration of the other recommended CP system improvements. Following CP system upgrades, the Collector 3 Rectifier should remain energized at levels corresponding to a maximum voltage near, but not to reach or exceed, 20 Volts.

The Jane's Creek Rectifier was not functioning at the time of assessment. The rectifier may have achieved its useful service life; and should be repaired or replaced. The existing anodes and anode beds should be replaced with a deep anode well in order to extend the service life and increase the DC output capacity of the Jane's Creek Rectifier installation. The existing anodes may be connected to the rectifier circuit along with the new deep well anodes as the existing anodes may continue to source (minimal) current and will not require abandonment. If repaired, the existing rectifier may remain in place and be re-purposed to energize the deep anode well.

The Jackson Ranch Rectifier was not functioning at the time of assessment. The rectifier may have achieved its useful service life; and should be repaired or replaced. The existing anodes and anode beds should be replaced with a deep anode well in order to extend the service life and increase the DC output capacity of the Jane's Creek Rectifier installation. The existing anodes may be connected to the rectifier circuit along with the new deep well anodes as the existing anodes may continue to source (minimal) current and will not require abandonment. If repaired, he existing rectifier may remain in place and be re-purposed to energize the deep anode well.

The Truesdale Rectifier was functioning at the time of assessment. However; at maximum tap setting, a DC output of 3.75 Amps was measured corresponding to a voltage of 27.5 Volts. The existing anodes and anode beds should be replaced with a deep anode well in order to extend the service life and increase the DC output capacity of the Jane's Creek Rectifier installation. The existing anodes may be connected to the rectifier circuit along with the new deep well anodes as the existing anodes may continue to source (minimal) current and will not require abandonment. The existing rectifier may remain in place and be re-purposed to energize the deep anode well.

As a part of the assessment, DC current was temporarily interrupted at the rectifier circuit by manually toggling the On/Off switch. The "On" and "Instant Off" measurements were obtained using a calibrated high

impedance voltmeter. This was done by connecting a lead between a calibrated portable saturated copper-copper sulfate (Cu/CuSO4) reference electrode and the negative terminal of the voltmeter. The positive connection necessary to complete the measuring circuit was made by directly contacting an electrically continuous appurtenance or test station of the structure DW pipeline. These readings were recorded with the cathodic protection system operating ("On") and with the current instantaneously interrupted ("Instant Off" or "Polarized").

"On" potentials measured in the vicinity of the functional rectifiers assessed, specifically the Highway 299 Rectifier and the Truesdale Rectifier, demonstrated: 1) and electro-negative shift with current applied; indicating electrical continuity with the current source (rectifier) and a negligible polarization shift from "On" to "Instant Off"; indicating influence from foreign sources of DC current.

The corrosion-related degradation reported on appurtenant connections of different material and/or coating type is likely due to a localized difference in pipeline potentials between the project pipeline and the appurtenant connection. The difference in electrical potentials results in the formation of a galvanic corrosion cell where the steel or ductile iron becomes the anode and corrodes near the point of connection. This phenomena may be mitigated by achieving cathodic protection on all segments of the DW system. Alternative corrosion control measures may include installation of dielectric flanges or dielectric unions to remove electrical connection between dissimilar metals; or installation of galvanic cathodic protection near the appurtenant connection locations.

Recommendations:

1. The four existing anode shallow beds at the Highway 299 Rectifier, the Jane's Creek Rectifier, the Jackson Ranch Rectifier and the Truesdale Rectifier should be replaced with deep anode wells. Deep anode wells may be installed immediately adjacent to the existing rectifier locations or within a range of up to approximately 100 linear feet from each rectifier location. Anode leads should be connected to rectifiers utilizing an anode junction box which will enable the DC current output of each individual anode to be measured and assessed. Deep anode wells will provide two (2) primary advantages with respect to shallow anode wells: 1) deep anode wells provide much further distribution of current; which is particularly important in consideration of concerns related to potential over-polarization and 2) deep anode wells provide significantly less anode circuit resistance, enabling substantially increased DC current output. The linear distance along a pipeline that cathodic protection may be achieved using a deep anode well current source, given the particular pipeline coating type, diameter, and soil resistance characteristics, is directly proportional to the depth of the anode well. Deep anode well design should be conducted by a NACE CP Specialist based on the distance between existing rectifiers; predicted DC current attenuation along the pipeline, and various other factors.
2. Jane's Creek and Jackson Ranch Rectifiers should be repaired or replaced contingent with the anode well upgrade project.
3. Due to the multiple electrical shorts that exist throughout the DW pipeline system, it is not recommended to attempt system upgrades in the form of deep anode well installation associated with a specific system segment or segments that are intended to be electrically isolated from the

greater system. Conversely, due to the presently undefined possibility of electrically isolated pipeline segments, it is not recommended to conduct system upgrades in the form of deep anode well installation and energization associated with selected segments or at selected rectifier locations. It is recommended that the four anode deep wells be energized concurrently and adjusted based on the collective system functionality. If the installation of anode deep wells is not installed concurrently and is phased over months or years, it is recommended that newly installed anodes be left unconnected until the time that all four anode wells are installed functional and the Jane's Creek and Jackson Ranch Rectifiers have been repaired or replaced.

4. Due to the multiple electrical shorts that exist throughout the DW pipeline system, potential measurement in order to demonstrate conformance with criteria per NACE SP0-100 will not be possible. HBMWD should adopt a cathodic protection criteria, to be established by an accredited NACE Cathodic Protection Specialist, based on the "On" potential readings (only) as it is determined not practical or viable to measure accurate native or polarized potentials. The use of coupon test stations for the purpose of monitoring, measurement of polarized potentials, and assessment may be considered and installed as a part of future cathodic protection system infrastructure improvements. A sample of such criteria is a measured "On" potential more electronegative than -700 mV and more electropositive than -900 mV vs. a calibrated Cu-CuSo4 reference electrode.
5. Following cathodic protection improvements, a DW system-wide "On" potential survey should be initiated and conducted by a NACE Cathodic Protection Specialist concurrently with rectifier adjustment based on achieving the target potential range. Sections of electrically isolated or electrically discontinuous pipeline segments, if any, should be identified as a part-of the system-system wide testing to be conducted post-improvement. Once identified, remediation measures including electrical bonding or installation of jumpers at discontinuous pipeline joints, should be implemented by HBMWD staff on an as-needed basis.
6. Once cathodic protection improvements are implemented, monthly rectifier assessments should be conducted by HBMWD staff to confirm that rectifiers are functional and that rectifier DC outputs are within a noted range as determined per the rectifier gauge readings.
7. Future DW-system CP surveys may be conducted by HBMWD staff by measuring pipeline "On" potentials vs. a calibrated Cu-CuSo4 reference electrode. HBMWD may wish to adopt a testing program which involved testing 25% (example) of known test stations each calendar or fiscal year.
8. If the recommendations for cathodic protection system upgrade, Recommendation 1 and Recommendation 2, are deferred or otherwise not instituted, localized cathodic protection at the connection point of appurtenances with dissimilar material or coating materials may be pursued. Localized galvanic cathodic protection systems should be designed by a NACE CP Specialist. Electrical isolation of future appurtenant connections should be achieved utilizing dielectric flange kits or dielectric unions.

It is important to note that once cathodic protection infrastructure is restored to a functional state, over-polarization of the DW pipelines may be possible by providing excessive levels of DC current. Various, potentially deleterious effects, related to over-application of DC current are possible when the

electronegativity of pipeline potentials exceeds threshold values. It is critical that once capacity has been restored, potentials be regularly monitored to confirm that pipeline "On" potentials are not more electronegative than a prescribed value. Should potentials be read which are more electronegative than the referenced value, adjacent rectifier tap settings should be turned down and/or HBMWD should immediately alert a qualified corrosion consultant.

GHD appreciates the opportunity to provide corrosion engineering services. Should you have any questions, comments, please do not hesitate to contact us directly.

Respectfully submitted,

GHD Inc.

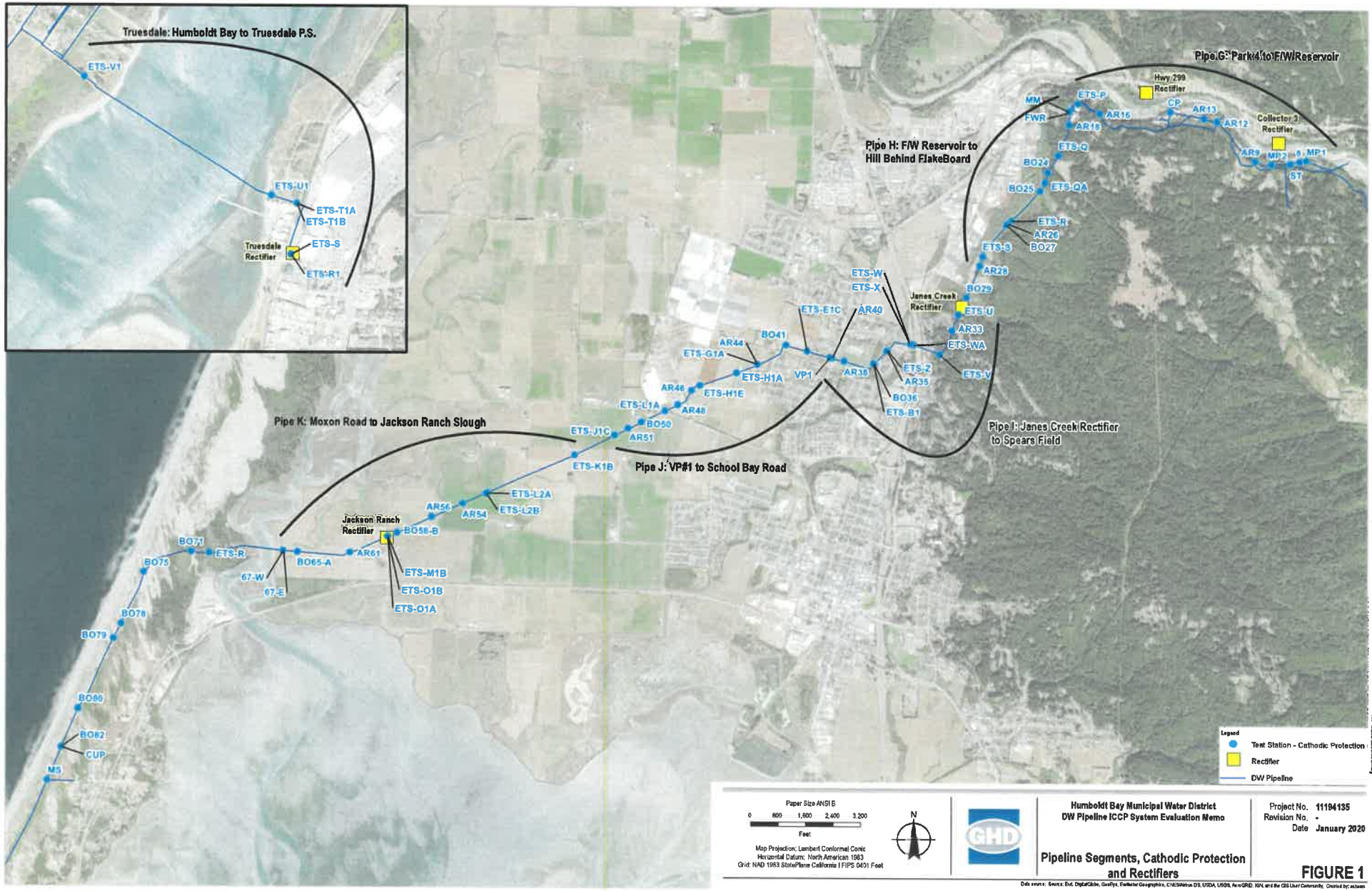
Jeff Knauer, PE, NACE Specialist
Senior Corrosion Engineer

Patrick Kaspari, P.E.
District Engineer

Attachments:

Attachment A:	HBMWD DW System Site Plan
Attachment B:	HBMWD DW System Pipe-to-Soil Potential Data
Attachment C:	HBMWD DW System Rectifier Data

Attachment A– Site Plan



SECTION 3K, PAGE NO. 9

January 7, 2020, rev. Jan. 21, 2020

Mr. John Friedenbach
Humboldt Bay Municipal Water District
P.O. Box 95
Eureka, CA 95502-0095

Ref: 11180211

Re: 2019 Domestic Water Pipeline Impressed Current Cathodic Protection (ICCP) System Evaluation – ENGINEER'S OPINION OF RECOMMENDED SYSTEM IMPROVEMENTS IMPLEMENTATION COSTS

Dear John,

GHD's 2020 Domestic Water Pipeline Impressed Current Cathodic Protection (ICCP) System Evaluation Letter Report included recommendations for system improvements; which included installation of deep anode wells to replace existing shallow wells at four (4) locations and repair or installation of new rectifiers at two (2) locations. GHD has developed an Engineer's Opinion of Possible Engineering Fees and Construction Bid Costs associated with implementation of the recommendations for system improvement. Opinions of cost are listed in two columns: "Without Rectifier Replacement" to indicate the estimate of system improvement costs if new rectifiers are not installed. The column "With Replacement of Jane's Creek and Jackson Ranch Rectifiers" represents the opinion of costs for system improvements to include replacement of the two rectifiers. Costs listed are in 2020 values.

Description of Task	Without Rectifier Replacement	With Replacement of Jane's Creek and Jackson Ranch Rectifiers
Engineering: Design Phase Services	$40,000	$40,000
Engineering: Bid Phase Services	$10,000	$10,000
Engineering: Construction Phase Services	$25,000	$25,000
Installation of Two (2) New Deep Anode Wells: -Includes installation of new anode junction boxes and utilization of existing rectifiers:	$130,000	$130,000

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Installation of Two (2) New Deep Anode Wells and (optional) Rectifier Replacement: -Utilizing existing AC service:	$130,000	$180,000
Post-Construction Survey, System Adjustment, Development of Corrosion Criteria	$20,000	$20,000
Total:	$355,000	$405,000

GHD appreciates the opportunity to provide corrosion engineering services. Should you have any questions, comments, please do not hesitate to contact us directly.

Respectfully submitted,

GHD Inc.

Jeff Knauer, PE, NACE Specialist
Senior Corrosion Engineer

Patrick Kaspari, P.E.
District Engineer

North American Society for Trenchless Technology (NASTT)
NASTT 2020 No-Dig Show
Denver, Colorado
April 5-9, 2020

MA-T2-03

HDD Crossing of a Fault Zone Beneath the Mad River

Matthew Wallin, PE, Bennett Trenchless Engineers, Folsom, CA
Nathan Stevens, PE, GHD Inc., Eureka, CA

1. ABSTRACT

This paper discusses the HDD replacement of 1,200 feet of existing 18-inch water main crossing over the Mad River, near Blue Lake, CA for the Humboldt Bay Municipal Water District (HBMWD). The existing water line was attached to a local railroad bridge that was no longer maintained by the rail company, and was falling into disrepair. The primary challenges on the project were the geotechnical conditions and constricted pipe layout area. The proposed bore alignment was predominantly located in fresh meta-argillite bedrock, but also crossed a 200-foot fault gouge zone, comprised of highly sheared fat clay with various-sized clasts of parent bedrock, beneath the active river channel. The dissimilar ground conditions and sheared nature of the fault gouge presented a risk of fluid losses beneath the river, as well as potential issues with steering response.

Another significant challenge was the constricted layout on the exit side of the bore. The carrier pipe had to be turned through a tight bend radius immediately past the exit point due to dense vegetation and steep topography near the exit.

This paper discusses the design challenges and successful construction of the pipeline. The presentation emphasizes the collaboration between the contractor, owner, and design team during construction to resolve issues in a timely manner. Construction of the HDD portion of the pipeline was successfully completed in September 2018 by J-C General Engineering, Inc.

2. PROJECT BACKGROUND

Humboldt Bay Municipal Water District's (HBMWD; District) City of Blue Lake and Fieldbrook–Glendale (BLFG) Community Services District (CSD) Water Transmission Main Replacement Project consisted of the abandonment and replacement of the District's existing 14-inch water main crossing of the Mad River. As shown in Figure 1, the existing pipeline crossing of the Mad River and the proposed replacement crossing are located approximately 3.6 miles northeast of Arcata, CA, just south of Highway 299 on the west edge of the community of Glendale. The pipeline provides the main water supply to the Blue Lake, Fieldbrook, and Glendale communities (see Figure 2). The original pipeline crossed above the river on a disused North Coast Railroad Authority (NCRA) bridge that was in deteriorating condition and was no longer maintained by NCRA, as shown in Figure 3.

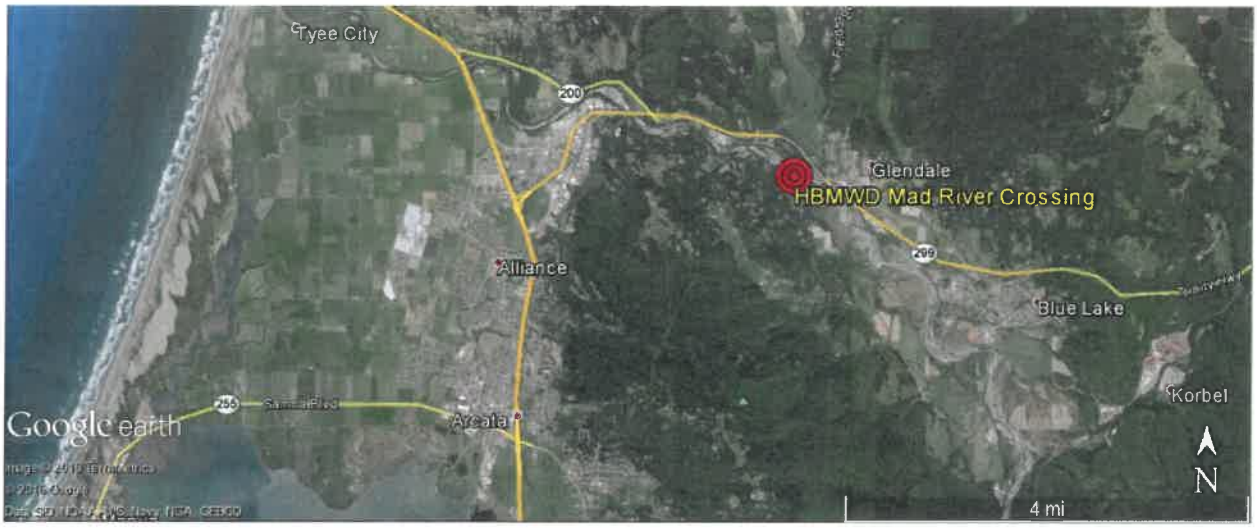

Figure 1 – Overall project site map

The preliminary design scope called for the evaluation of two replacement options: a new pipe bridge, or a new trenchless installation beneath the river. GHD served as HBMWD's prime design consultant on the project and lead the evaluation efforts for the pipe bridge option. Bennett Trenchless Engineers (BTE) was retained by GHD as a subconsultant to evaluate the feasibility and estimated construction cost for the trenchless crossing alternative.

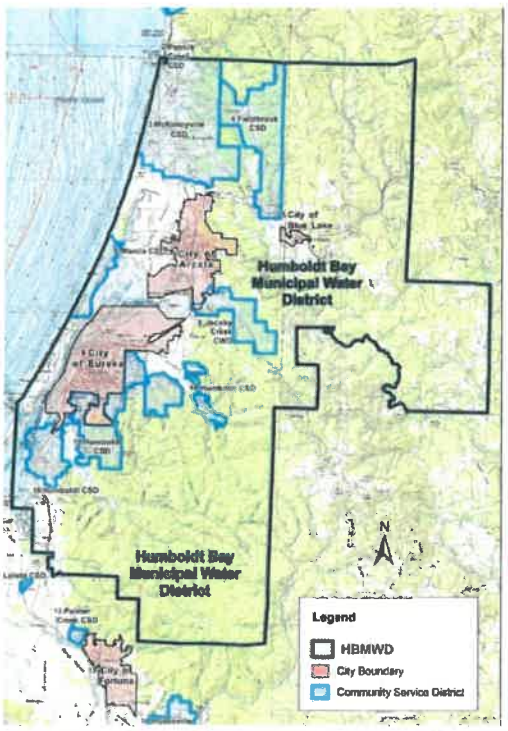

Figure 2 – HBMWD Service Area near Eureka, CA

Figure 3 – Original 14" water line crossing NCRA RR bridge

The pipe bridge alternative is shown in Figure 4 and was proposed to consist of a 560-foot suspension structure spanning the river channel, with 2-inch diameter galvanized steel main suspension cables supporting the new 14-inch diameter ductile iron water main. The pipe bridge alternative was evaluated by GHD and estimated to cost just over $3.0M to construct. The pipe bridge option would require extensive permitting through the CEQA/NEPA process, the Regional Water Quality Control Board (RWQCB), a 1600 permit from the California Department of Fish and Wildlife (CDFW), and both 401 and 404 permits from the US Army Corps of Engineers (USACE).

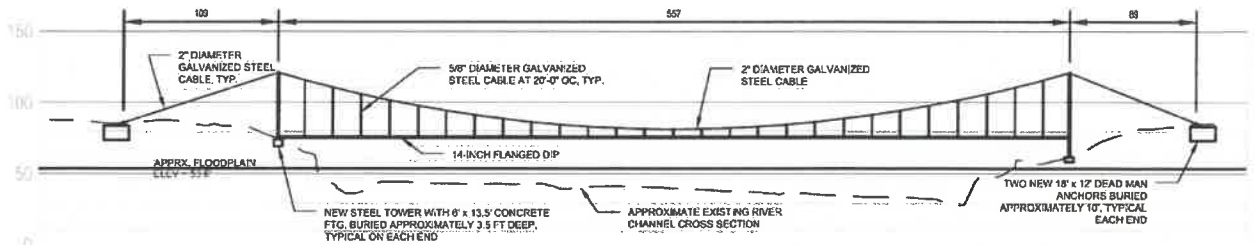

Figure 4 – Preliminary design concept for a pipe bridge replacement of the 14" water line

GHD also assessed the permitting requirements for the trenchless undercrossing of the river and found that the process would be significantly reduced due to the lack of impacts to the river channel. The streamlined permitting process, and ultimately lower estimated construction cost (discussed later), favored a trenchless approach.

3. SITE CONDITIONS

As shown in dark blue on Figure 5, the original water line ran along Warren Creek Road, before turning east off the road and then crossing the Mad River attached to the NCRA bridge. After passing over the river, the pipeline then followed the abandoned railroad grade adjacent to property owned by GR Sundberg, Inc. that is currently used as an equipment yard for their general contracting business (shaded green in Figure 5). Finally, the pipeline turned northeast and connected to distribution lines running in both directions along Glendale Drive.

Figure 5 – Site map showing location of original water line and approximate trenchless alignment

The site topography at the river crossing consists of relatively flat terraces on both sides with a deep channel and steep banks. The elevation on both sides of the river is approximately 85 to 90 feet, with the majority of the river bed at elevation 35. The deepest elevation of the main channel at the crossing location is approximately elevation 29 to 30.

The northeastern side of the proposed crossing was to be located at the far western end of GR Sundberg's large equipment yard. The site had been graded flat, was free of vegetation, and did not have any equipment stored nearby. The area between the equipment yard and the north end of the NCRA bridge was covered in undergrowth and small trees. The southwestern side of the crossing was located in a wooded area. As the existing pipeline comes off of the NCRA bridge, it follows the abandoned railroad grade (shown in orange) which runs parallel to Warren Creek Road. The existing water main was within Warren Creek Road at this location, with the railroad grade located down a steep bank to the north/east of the road and overgrown with low vegetation and small trees. The surrounding area to the east and north is fully forested with mature trees and undergrowth.

The geotechnical investigation for the Mad River crossing was performed by Crawford & Associates, Inc. (CAInc). Four geotechnical borings were completed along the proposed crossing alignment during the preliminary design phase, two on each bank of the river. Each of the four borings encountered similar soil and rock layers. In areas formerly occupied by the NCRA rail line, a few feet of fill materials consisting of clayey soil with significant gravel from the

rail ballast were encountered at the surface. Below the fill, the borings encountered 2 to 12 feet of terrace alluvium deposits consisting of stiff to very stiff clay, sandy clay, and dense clayey sand with varying amounts of gravel up to 30-40%. Beneath the terrace deposits, the borings encountered 3 to 6 feet of residual soil from advanced weathering of the bedrock below. The residual soil exhibited similar properties of stiff to very stiff clay, sandy clay, and dense clayey sand with varying gravel portions. Finally, each of the borings encountered 5 to 12 feet of weathered meta-argillite bedrock, followed by fresh bedrock to the maximum depths explored. The lithographic contacts sloped toward the river on each side. The contact with weathered bedrock also sloped toward the river on each side. A profile of the preliminary soil and rock layers encountered is shown in Figure 6. Based on the preliminary geotechnical conditions encountered, any trenchless crossing alternative would need to be constructed a minimum of 15 to 30 feet below the bottom of the river channel and would therefore be constructed almost entirely within the fresh bedrock.

Groundwater was not encountered in any of the borings. However, the deepest boring only reached elevation 48 feet. It was assumed that groundwater would be encountered near the surface water elevation of the river at approximately 35 feet. The preliminary investigation also showed the presence of alluvial bedload deposits in the active river channel consisting of sand, gravel, cobbles, and boulders. CAInc also noted the presence of a potential fault zone beneath the active low water channel on the north side of the river bed. The final geotechnical investigation phase was planned to further evaluate the conditions expected in the unweathered bedrock, the depth of the alluvial channel bed load, and nature of the potential fault zone.

For the final geotechnical investigation, CAInc completed three additional geotechnical borings; one each near the entry and exit points of the crossing, and one in the main river channel in the area of suspected faulting. The conditions indicated in the final borings are shown in the geotechnical profile presented in Figure 7. The unweathered bedrock was confirmed as meta-argillite with unconfined compressive strength as high as 17,000 psi, and averaging ~12,000 psi. The most striking condition discovered by the final borings was the confirmation of a fault zone beneath the active water channel and the presence of a historic river thalweg infilled with approximately 30 feet of alluvial sand, gravel, cobbles, and boulders. The material encountered beneath the thalweg consisted of claystone that has been highly sheared due to faulting into a very stiff to hard clay with sand and gravel clasts of the parent bedrock. Based on fault maps and surface observations, the zone of fault gouge material was estimated to be approximately 200 feet wide.

4. TRENCHLESS METHODS

Trenchless construction methods such as auger boring (sometimes referred to as bore and jack), open-shield pipejacking, and pipe ramming are open-faced methods where the excavation face is not sealed against groundwater and unstable soil conditions. These methods would not have been suitable for construction in saturated conditions such as the Mad River crossing due to the risk of flooding within the tunnel. Several trenchless construction methods could be suitable for installing a pipeline beneath a river including earth pressure balance (EPB) pipejacking, microtunneling, and horizontal directional drilling (HDD). Due to the anticipated solid rock conditions combined with the required length of the crossing (at least 700 feet) the use of microtunneling or earth pressure balance pipe jacking would have been challenging due to the risk of tooling wear while excavating the rock. Additionally, the depth of a microtunneled or EPB pipejacking crossing (at least 75 feet below the terraces) would have required very expensive shaft excavations preventing these methods from being cost competitive with HDD. Finally, microtunneling or EPB pipejacking equipment capable of tunneling in rock would have needed to be a minimum of 48 inches in diameter to allow for the proper tooling to be used at the excavation face. The water line would then have been installed within the oversized steel casing pipe installed by the microtunnel or EPB equipment. This two-step installation process would have further exacerbated the issues with cost competitiveness. These factors left HDD as the sole feasible, practical, and cost-efficient method for completing the Mad River trenchless crossing.

5. ALIGNMENT DESCRIPTION AND WORK AREA CONSIDERATIONS

The Sundberg equipment yard on the east side provided substantial layout area for either the drill rig setup or pipe fabrication and layout. On the west side, undergrowth and some trees would have had to be cleared to allow for either work area. If the entry point were located on the west side, a large, roughly rectangular work area would be needed measuring approximately 10,000 square feet. Approximately 3,500 square feet would need to be completely cleared for the drill rig, drill pipe storage and handling, and the separation plant. The remaining area could likely retain any

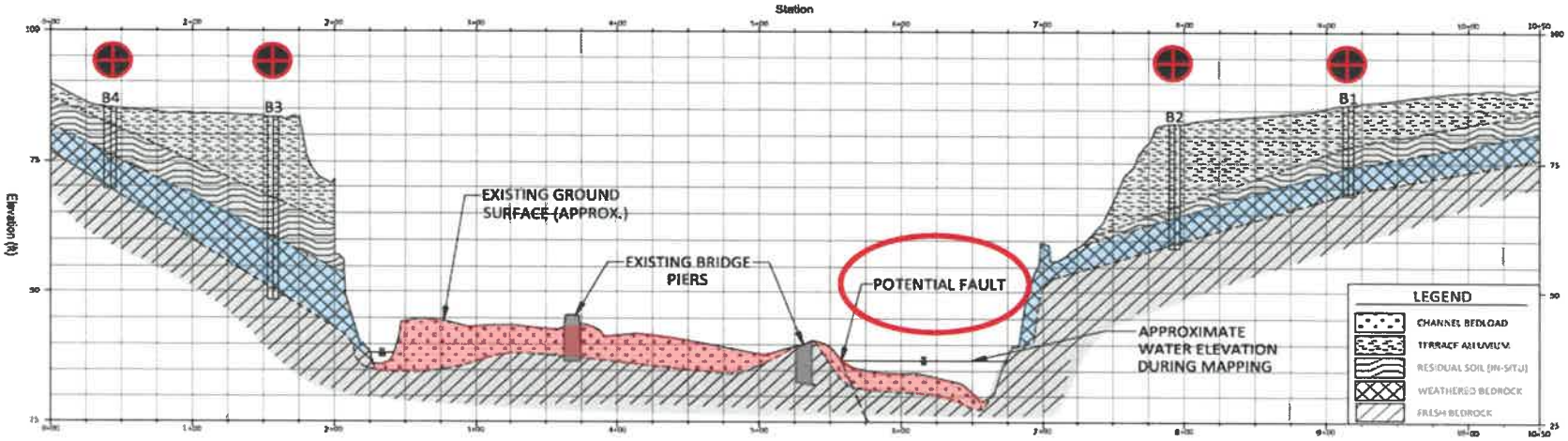

Figure 6 – Preliminary geotechnical profile for the crossing of the Mad River

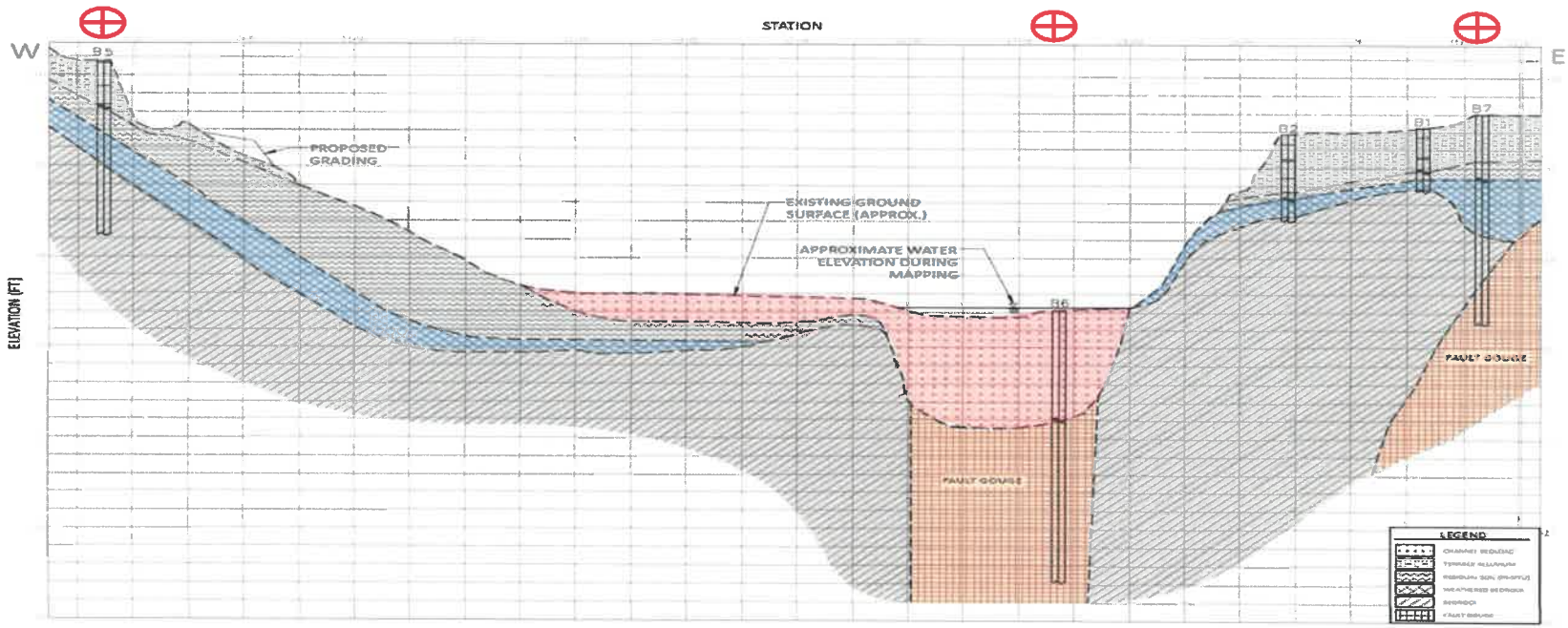

Figure 7 – Final geotechnical profile for the crossing of the Mad River

SECTION J PAGE NO. 5

mature trees, with the equipment stored below the canopy. If the exit point were located on the west side, a long, narrow work area would be required to allow for pipe fabrication and layout prior to pullback. The majority of this work area would not have to be completely cleared, however one clear location measuring approximately 30 feet wide by 50 feet long would be necessary for setting up the fusion machine and pipe handling equipment. The abandoned NCRA rail alignment provided a long narrow corridor for pipe staging, however the orientation of this area was nearly perpendicular to the proposed bore alignment, requiring a tight bend in the pipe to transition from the ground surface down into the bore.

Figures 5 and 8 illustrate the final bore alignment and profile, respectively, for the trenchless crossing alternative. The bore design was developed based on the capabilities and limitations of the HDD method, the required pipe diameter, mitigation of potential hydrofracture risks to the river channel, and the other site constraints. The conceptual final alignment was 1,150 feet long, measured horizontally between the entry and exit points. The proposed entry point was located on the east side of the river, at the west end of the GR Sundberg equipment yard. From entry, the bore proceeded almost due west to a portion of the abandoned NCRA railroad alignment just east of Warren Creek Road, crossing diagonally beneath the NCRA bridge near the east bank of the river (shown in light blue on Figure 5). The bore profile was designed to pass a minimum of 50 feet beneath the active channel of the Mad River at all points along the profile, and a minimum of 30 feet below the bottom of the known granular channel bed deposits. Due to the steep slope of the riverbank on the west side of the crossing and the requirement for the pipeline to surface east of Warren Creek Road in the NCRA RR alignment, the bore profile had a spot of low vertical cover (17 feet) approximately 175 feet from exit. To maximize vertical cover in this area, and to better align the bore with the available pipe layout area along the abandoned NCRA tracks, the bore incorporated a 750-foot radius horizontal curve near the exit end. The entry and exit angles for the conceptual bore were both 18 degrees. Both vertical curves have a radius of 750 feet and the lowest elevation of the proposed bore alignment was -35 feet.

The west end point of the bore was chosen to keep the bore as short as possible, while still attaining adequate depth beneath the river. It was also chosen to allow for a short connection length to the existing water line, to keep the bore within HBMWD property, and to allow for construction access directly off of Warren Creek Road. The east end point was similarly chosen to minimize the bore length, but maintain adequate depth. It was also chosen to allow for a short connection to the existing line, and to minimize disruption to the Sundberg's property.

Typically, the depth of an HDD bore for a river crossing is chosen to mitigate the risk of hydrofracture (or inadvertent fluid returns) into the river channel during construction. Because most of the bore was anticipated to be constructed completely within competent bedrock, risk of hydrofracture was anticipated to be low for most of the alignment. However, the variable nature of the fault gouge material expected in the sheared zone presented an increased risk in this area. Bore depth was maximized in this area to mitigate the risks presented by the variable conditions and the potential for preferential flow paths for drilling fluid along shears and fractures.

6. DESIGN CONSIDERATIONS

The most common pipe materials used with HDD are steel, HDPE, fusible PVC (FPVC), and ductile iron (DI). Of these four, HDPE and steel are by far the most commonly used. Fusible PVC is a product that was developed relatively recently, but the material has been gaining recognition and popularity in the HDD market and many HDD projects have been successfully completed using FPVC. Based on long term corrosion issues and the tight bend radii needed for the bore geometry, HDPE and FPVC pipe were the most likely carrier pipe materials to be used for the Mad River crossing. However, the very tight bend radius (less than 200 feet) required to transition the pipe from the surface staging area into the bore was likely to be less than the minimum allowable radius for FPVC. Therefore, the bore design called for 18-inch DR 9 IPS HDPE pipe as the carrier pipe to be installed.

Hydrofracture, or inadvertent drilling fluid returns, to the ground surface is a serious concern for any HDD crossing. A preliminary analysis of the hydrofracture risks for the project was performed and is shown in Figure 9. The figure shows a plot of the ground surface and bore profile in feet of elevation, (right hand y-axis) and the maximum allowable drilling fluid pressure the ground can withstand and minimum required drilling fluid pressure required to complete the bore in psi (left hand y-axis), against horizontal stationing on the x-axis. The maximum allowable pressure increases with increasing depth of cover. The lowest allowable pressures are seen near the entry and exit points and under low points, such as the bottom of the river and the location of low earth cover near the west edge of the river

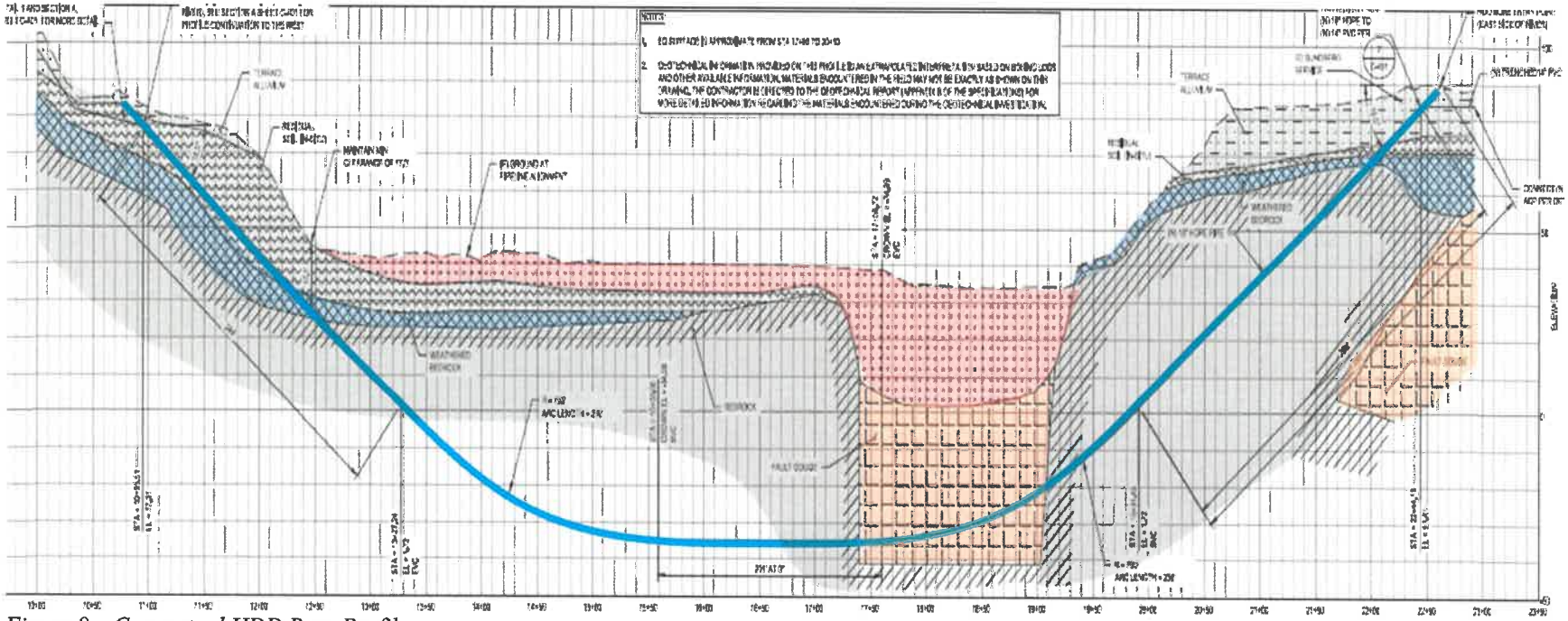

Figure 8 – Conceptual HDD Bore Profile

channel. The minimum required pressure to return the drilling fluid to the entry point increases as the distance from the entry point increases and as the depth of the bore increases. Critical locations, where risk of hydrofracture is elevated, occur where the minimum required drilling fluid pressure (P_{min}) exceeds the maximum allowable pressure (P_{max}).

Figure 9 shows that the risk of hydrofracture was low for the majority of the crossing length. The analysis showed a slight increase in risk through the fault gouge zone due to the sheared bedrock material anticipated in this portion of the bore. Additionally, because the depth of cover decreases toward the exit point, there was an elevated risk of hydrofracture starting at the west edge of the river channel and continuing to the exit point. This risk is not uncommon for HDD bores and was mitigated through common measures including specifying that the drilling contractor have tools and equipment on-site for rapid containment and clean-up of any inadvertent fluid returns. A detailed Surface Spill and Hydrofracture Contingency Plan was also developed for the project that described the planned response in the event of an inadvertent drilling fluid return.

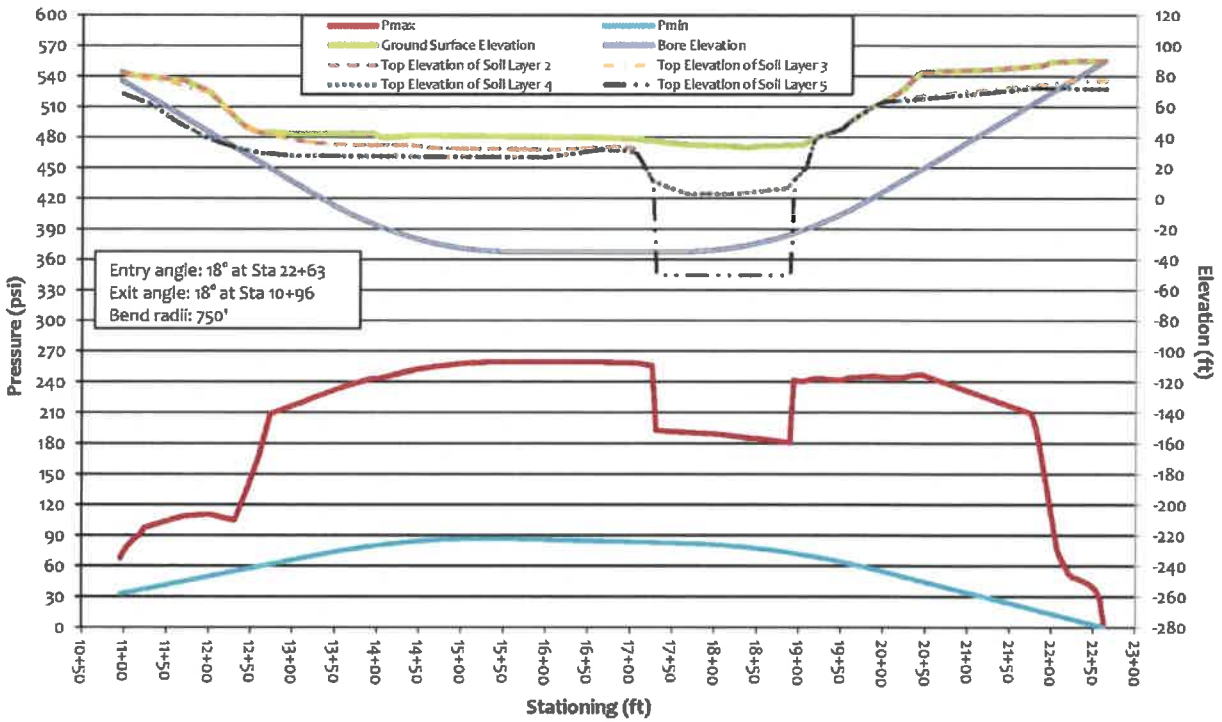

Figure 9 – Evaluation of Hydrofracture Risk: Comparison of Maximum Allowable and Minimum Required Drilling Fluid Pressures for the Pilot Bore of the Mad River Crossing

7. BIDDING AND CONSTRUCTION

With the design complete, the project was sent out for bids in March of 2018. Four bids were received, with the project being awarded to the low bidder Mercer Fraser Co. of Eureka, CA. Three of the four bids included the same HDD subcontractor: J-C General Engineering (JCGE) from Lodi, CA. The low bid was $1.04M, compared to the engineer's estimate of $2.0M, and included $876,000 for completion of the HDD crossing. Based on the crossing length of 1,150 feet, the unit cost of the HDD installation was $760/foot.

When the HDD contractor turned in their initial submittals they included a proposed revision to the bore alignment. To increase the depth of cover near the toe of the west river bank, and to better align the bore with the pipe staging area along the NCRA rail alignment, the contractor proposed extending the bottom tangent of the bore and initiating the horizontal curve earlier, combining it with the vertical curve and resulting in a compound radius. During the design process, BTE had considered a similar bore profile, but opted for a simpler design without compound curves to maintain a more approachable design for potential bidders who may have less experience with complex geometries. However, JCGE was able to demonstrate extensive experience completing complex bores, and the design team was

comfortable accepting their proposed revisions along with their assurance that the geometry could be achieved with their proposed means and methods.

JCGE began mobilization of HDD equipment to the site in late July of 2018. The drill rig used was a heavily modified American Augers DD200 with a pullback capacity of 300,000 pounds (Figure 10). JCGE planned to use a jetting assembly to advance the pilot bore as far as possible, before switching to a mud motor. They used a magnetic downhole wireline system for guidance with a full surface coil that was able to span the narrow active waterway of the Mad River. The tool also provided annular fluid pressure monitoring data.

Figure 10 – JCGE's Modified American Augers DD200 drill rig

Pilot bore drilling began in early August and only advanced 60 feet before an issue developed. As the pilot bit passed through the transition between fill placed on the site by Sundberg and native soils, drilling fluid began returning to the ground surface above the bore. Annular fluid pressures were low during this initial drilling and it was assumed that the inadvertent return resulted from a preferential flow path at the interface of the fill and native soil. JCGE implemented a unique solution to the problem by installing what they referred to as a "snorkel". Using a vibratory hammer, they installed an 8-inch diameter casing vertically over the return location, to within a few feet of the bore elevation. They then augered the soil out of the casing and installed a flange at the top, with a fitting for a 4-inch diameter hose. When drilling was resumed, fluid was able to flow back along the bore, up through the casing portion of the snorkel, and then through the hose back to the entry pit (see Figure 11). In this way, all fluid was captured and recirculated. After approximately one half-day of continued drilling, returns through the snorkel dropped off and all fluid was returning through the pilot bore.

Figure 11 – "Snorkel" implemented by JCGE to contain initial inadvertent drilling fluid return

Pilot bore drilling continued without issue for the next 350 feet, reaching the fault zone beneath the river channel at approximately 400 feet from entry. Upon transitioning from fresh bedrock to the softer, fault-gouged material the penetration rate increased significantly, but was choppy due to the apparent gravel- and cobble-sized clasts of intact rock in this segment. Drilling fluid pressures also began to climb, and after drilling approximately 50 feet into the gouge, circulation began to drop off intermittently. Cuttings recovered from the returning slurry indicated that the matrix of the fault gouge material consisted of highly plastic clay material that was prone to sticking to the tooling and clogging in the borehole. Penetration rates continued to be high, and circulation continued to be inconsistent, until the pilot bore reached approximately 560 feet. The pilot bore survey taken at this point indicated the bit had been deflected sharply up and to the left of the intended bore path over the last drill pipe. At this point, JCGE decided they would attempt to mitigate both the steering issue and the circulation issue by tripping out of hole with the pilot bit and pushing a 16-inch reamer down to increase the flow path over the first 500 feet.

The push reaming operation was advanced successfully to 490 feet over the next day of work, and resulted in improved circulation and reduced annular pressures. Pilot drilling was then resumed, with a realignment of the bore path initiated at the end of the 16" ream. While drilling new pilot hole at approximately 550 feet from entry, fluid returns suddenly dropped off and annular pressure in the bore began to drop quickly. The contractor immediately stopped drilling and the fluid pump was stopped. After pumping was stopped, the remaining fluid in the bore drained out of sight in less than one minute, indicating that fluid was being lost from the borehole. Both the contractor and the BTE inspector immediately went to the river channel to look for any signs of fluid returns to the surface or into the water channel. A thorough inspection was conducted along the bore alignment, both upstream and downstream along the river, and no fluid was observed. After backing the pilot bit away from the location of circulation loss, the contractor was able to resume pumping a low quantity of fluid with full circulation. Pilot drilling was resumed cautiously and the bit was advanced through the remaining 60 feet of fault gouge material. At the end of the day, the pilot bit had penetrated approximately 15 feet of hard, fresh bedrock on the far side of the fault zone, with full circulation of drilling fluid.

Subsequent remaining operations through the fault zone were completed without significant challenges. The clay remained softer and sticky, but no further circulation problems or fluid losses were experienced. Because the fluid lost during the pilot drilling never surfaced, it is unknown exactly what happened in the fault zone. It is assumed the sticky clay created clogging issues that led to fluid pressure spikes in the annulus, causing a hydrofracture failure along existing shear planes in the sheared zone. The fluid likely passed through the 30-35 feet of gouged clay and collected in the very deep pocket of sand and gravel filling the old river thalweg.

Pilot drilling continued smoothly across the remainder of the high-water channel, and successfully passed the location of lowest earth cover on the far side, with penetration rates indicating that the bore was still in hard, unweathered rock. No issues were experienced with fluid pressures or inadvertent returns in this area. However, as the bore was climbing up toward the exit point, with approximately 110 feet left to drill, and 150 feet of progress past the shallow spot, circulation was suddenly lost again. Several crew members and the BTE inspector went to the exit area to look for fluid at the surface while drilling was slowly continued with reduced pumping rates. No fluid was observed returning to the surface above the bit location, but as the search was expanded fluid was discovered leaking out of the steep channel bank approximately 15 feet above the area of lowest earth cover (see Figure 12). The returns were surfacing over 100 feet closer to entry than the current bit location and appeared to be flowing out of existing holes in the slope that may have been caused by decomposed tree roots or animal activity. A total of approximately 200 gallons of fluid was contained, and subsequently cleaned up, by JCGE at the base of the slope.

JCGE again decided to trip the pilot bit out of the hole and to further advance the 16-inch reamer to reduce fluid pressures and improve circulation before completion of the remaining 110 feet of pilot bore. Over the next three days the pilot bit was tripped out, the 16" reamer was tripped in and advanced an additional 400 feet (bringing the total 16" reamed distance to ~900 feet), and the pilot bit was tripped back in with a jetting assembly rather than a mud motor. The three remaining drill pipes were advanced through highly weathered rock/residual soil, and the pilot bore was completed within a few feet of JCGE's revised bore alignment (see Figure 13). Circulation was intermittent during this drilling and three or four small puddles of drilling fluid were contained and cleaned up near the exit point.

JCGE removed the pilot bit assembly at the exit and installed a 27-inch reamer at the drill rig to begin push reaming to the final bore diameter, as shown in Figure 13. Because of the steep topography just beyond the exit point it was not possible to use conventional methods to pull on the tail string during reaming, as is typical in push-reaming

operations to keep good contact between the reamer and the rock face. JCGE tried to implement a creative method to apply tension by burying a section of casing in the slope behind the exit point to act as a deadman. A cable was then attached to the swivel on the end of the drill string, passed through a pulley at the deadman, and then connected to a backhoe moving along the old railroad grade. The system was intended to allow for the transfer of tension through the approximately 45 degree bend between the bore alignment and the pipe staging area, however the deadman kept pulling out of the unconsolidated ground in the slope and system couldn't work as intended.

Figure 12 – Location of surface return of drilling fluid (red) with corresponding bit position (blue arrow). Pool of fluid accumulated at the base of the steep canyon (right photo).

Figure 13 – Exit location of the pilot bore (upper right); deep pit excavated at the exit location to allow for transition of the carrier pipe into the bore (left); and the 27" reamer connected at the entry pit (lower right).

The lack of tension led to very slow progress pushing the large reamer through hard bedrock, and the 27-inch reaming operation was stopped at approximately 800 feet from entry. JCGE chose to finish the remaining 400 feet of reaming with a smaller 24-inch reamer, and pull the pipe through a section of smaller diameter bore. The 24-inch bore diameter fell below the typical standard 1.5x sizing for 18-inch pipe (1.5 x 18" = 27"), however it was decided that with a relatively short section of bore, drilled mostly through stable rock conditions, that the risk was acceptable.

Pullback of the carrier pipe began in the late morning of September 11 and was successfully completed in approximately 3.5 hours. Initial pull forces were as high as 45,000 pounds, and slowly decreased throughout the remainder of the pull. Due to the high capacity of the DR 9 HDPE used (134,000 pounds) and the estimated pull loads conducted during design (82,000 pounds), ballast water was not considered necessary and was not added to the pipe during actual pullback. Figures 13 (left) and 14 (left) show the large exit pit excavated by JCGE to help the pipe navigate both the horizontal and vertical bends necessary to transition into the steep bore.

Figure 14 – Carrier pipe transitioning from abandoned railroad grade into exit pit (left); pull head arriving at the entry pit at the completion of pullback (right).

8. CONCLUSION

The BLFG CSD Water Transmission Main Replacement Project was successful in large part due to the collaboration of the entire project team, from the owner, to the design consultants, to the general and HDD contractors. With challenging conditions located both above and below ground, creativity and adaptability were necessary from all team members to bring the project to efficient completion.

HDD construction within the heavily sheared fault zone proved to be challenging, with varied materials consisting of chunks of intact bedrock within a highly plastic clay matrix causing both steering and fluid circulation issues. The deep cover provided in this location was likely a key component to preventing drilling fluid lost in this segment from surfacing in the sensitive river habitat. The contractor's proactive requests to modify the bore alignment and profile helped ease geometry challenges for pipe pullback and reduced the risk of hydrofracture at the area of lowest cover above the bore. Further, the contractor's adaptability during construction was important to minimize the effects of the drilling fluid returns that did occur. JCGE showed a commitment to complete this difficult project to the satisfaction of the design team and HBMWD.

9. REFERENCES

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FINANCIAL

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HUMBOLDT BAY MUNICIPAL WATER DISTRICT
STATEMENT OF FUND BALANCES - PAGE 1 OF 2

SECTION J2a PAGE NO. 2

BANK ACCOUNT BALANCES AT MONTH-END	January 31, 2020	January 31, 2019
GENERAL ACCOUNTS		
1. US Bank - General Account	1,295,186.65	157,756.09
2. US Bank - Xpress BillPay/Electronic Payments Account	487.84	-
Subtotal	1,295,674.49	157,756.09
INVESTMENT & INTEREST BEARING ACCOUNTS		
3. US Bank - DWR/SRF Money Markey Accnt	166,275.21	164,365.41
4. US Bank - DWR/SRF Reserve CD Account	547,336.94	547,336.94
5. US Bank - PARS Investment Account	785,904.75	658,150.68
6. L. A. I. F Account - General Account	1,687.78	1,646.46
7. L. A. I. F Account - MSRA Reserve Account	436,009.70	-
8. CalTRUST - Restricted Inv. Account (Medium Term)	-	-
9. CalTRUST - Unrestricted Inv. Account (Medium Term)	-	-
10. CalTRUST - DWFP Reserve Account (FedFund)	-	-
11. CalTRUST - ReMat Account (LEAF Fund)	522,410.91	-
12. CalTRUST - General Reserve Account (Short-Term)	1,220,035.03	-
13. Humboldt County - SRF Loan Payment Account	96,022.79	95,586.93
14. Humboldt County - 1% Tax Account	-	1,277.00
15. Principle Investment Account	28,275.30	26,737.38
Subtotal	3,803,958.41	1,495,100.80
OTHER ACCOUNTS		
16. ReMat Deposit - Mellon Bank	27,000.00	27,000.00
17. Cash on Hand	650.00	650.00
18. Humboldt County - Investment Account (clsd)	1,708,452.75	1,386,076.47
19. Humboldt County - DWFP Reserve Account (clsd)	238,086.51	235,996.76
20. Humboldt County - MSRA Reserve Account (clsd)	-	431,932.99
21. Humboldt County - ReMat Account (clsd)	-	334,336.49
Subtotal	1,974,189.26	2,415,992.71
TOTAL CASH	**7,073,822.16**	**4,068,849.60**

SECTION J2a PAGE NO. 3

FUND BALANCES AT MONTH-END		January 31, 2020	January 31, 2019
RESTRICTED FUNDS - ENCUMBERED			
1. Prior-Year Price Factor 2 Rebate		(27,175.57)	(15,787.02)
2. Prior-Year Restricted AP Encumbrances		(52,313.00)	-
3. Advanced Charges - Bunkhouse		-	(58,455.28)
4. Advanced Charges - 12Kv Relocation		(344,707.00)	(200,000.00)
5. Advanced Charges - Chlorine Scrubber		(350,000.00)	-
6. Advanced Charges - Collector 2 Rebabilitation		(385,000.00)	-
7. Advanced Charges - TRF Emergency Generator		(225,000.00)	-
8. Advanced Charges - Three Tank Seismic		(30,000.00)	(255,000.00)
9. Advanced Charges - 18,000lb Excavator		(54,343.00)	-
10. Advanced Charges - Redundant Pipeline		-	(260,245.00)
	Subtotal	(1,468,538.57)	(789,487.30)
RESTRICTED FUNDS - OTHER			
11. 1% Tax Credit to Muni's		-	(1,277.00)
12. DWR Reserve for SRF Payment		(166,275.21)	(164,365.41)
13. DWR Reserve for SRF Loan		(547,336.94)	(547,336.94)
14. Pension Trust Reserves		(785,904.75)	(650,923.94)
15. ReMat Deposit		(27,000.00)	(27,000.00)
	Subtotal	(1,526,516.90)	(1,390,903.29)
UNRESTRICTED FUNDS			
BOARD RESTRICTED			
17. MSRA Reserves		(436,009.70)	(431,932.99)
18. DWFP Reserves		(238,086.51)	(235,996.76)
19. ReMat Reserves		(522,410.91)	(344,222.31)
20. Paik-Nicely Development		(4,158.00)	(4,158.00)
21. Principle Investment Reserves		(28,275.30)	(26,737.38)
	Subtotal	(1,228,940.42)	(1,043,047.44)
UNRESTRICTED RESERVES			
22. Accumulation for SRF Payment		(96,022.79)	(95,586.93)
23. Accumulation for Ranney/Techite Payment		(10,310.03)	(7,290.09)
General Fund Reserves		(2,743,493.45)	(2,922,925.14)
	Subtotal	(2,849,826.27)	(3,025,802.16)
TOTAL NET POSITION		**(7,073,822.16)**	**(4,068,849.60)**

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
REVENUE REPORT
January 31, 2020

SECTION J2e PAGE NO. 4

58% *Of Budget Yea*

A. REVENUE RETURNED TO CUSTOMERS VIA PF2

	MTD RECEIPTS	YTD RECEIPTS	PRIOR YEAR	BUDGET	% OF BUDGET
1. Humboldt Bay Retail Water Revenue	37,331	280,202	264,834	318,394	88%
General Revenue					
Interest	0	570	10,231	30,000	2%
FCSD Contract (Maint. & Operations)	60,568	133,421	176,066	225,000	59%
Power Sales (Net ReMat)	4,659	38,449	31,304	220,000	17%
Tax Receipts (1% Taxes)	0	0	49,765	825,000	0%
2. Miscellaneous Revenue*	11,955	58,498	179,145	50,000	117%
**Detail on following page*					
TOTAL PF2 REVENUE CREDITS	114,513	511,140	711,345	1,668,394	31%

B. DISTRICT REVENUE

	MTD RECEIPTS	YTD RECEIPTS	PRIOR YEAR	BUDGET	% OF BUDGET
3. Industrial Water Revenue					
Harbor District	128	297	0	0	0
Subtotal Industrial Water Revenue	128	297	0	0	0
4. Municipal Water Revenue					
City of Arcata	116,671	802,966	753,610	1,321,044	61%
City of Blue Lake	16,119	112,316	106,550	182,807	61%
City of Eureka	275,657	1,896,048	1,794,629	3,119,229	61%
Fieldbrook CSD	14,458	101,829	99,546	174,392	58%
Humboldt CSD	87,423	609,066	604,343	1,072,333	57%
Manila CSD	6,377	44,182	37,048	70,168	63%
McKinleyville CSD	92,032	639,945	608,103	1,066,249	60%
Subtotal Municipal Water Revenue	608,737	4,206,351	4,003,829	7,006,222	60%
TOTAL INDUSTRIAL & WHOLESALE REVENUE	608,865	4,206,648	4,003,829	7,006,222	60%
5. Power Sales					
Power Sales (ReMat Revenue)	10,522	78,511	64,362	300,000	26%
Interest (ReMat Revenue)	1,930	1,930	969	0	
TOTAL REMAT REVENUE	12,452	80,441	65,331	300,000	27%
6. Other Revenue and Grant Reimbursement					
FEMA/CalOES Grant Revenue	74,000	447,930	312,932		
SWRCB In-Stream Flow Grant Revenue	0	158,617	0		
Quagga Grant (Pass-Through)	0	1,520	2,689		
Interest - Muni PF2 Retained	348	620	0		
Net Increase/Decrease PARS/Principle	11,701	36,529	3,239		
TOTAL OTHER/GRANT REVENUE	86,049	645,216	318,861		
GRAND TOTAL ALL REVENUE	821,879	5,443,445	5,099,366	8,974,616	61%

B. MISCELLANEOUS RECEIPTS (RETURNED TO CUSTOMERS VIA PF2)

	MTD RECEIPTS	YTD RECEIPTS
Miscelaneous Revenue		
ACWA/JPIA HR LaBountv Safetv Award	-	-
ACWA/JPIA Insurance Claim	-	2,326
ACWA/JPIA Retrospective Premium Adj.	-	-
ACWA/JPIA Wellness Grant	-	960
Dividend - Principal Life	294	876
Fees - Park Use	-	50
Fees - Right of Way	-	-
Insurance - Claim Reimbursement	-	830
Insurance - Special Event Liability	-	-
Refund - GHD, TRF Generator Grant	-	6,549
Rebate - CALCard	-	277
Refund - Diesel Fuel Tax	-	-
Refunds - Hum. County Appeal (01/18)	-	2,263
Refunds - Miscelaneous	1,032	2,170
Reimb. - Copies & Postage	2.90	244
Reimb. - Gas	-	113
Reimb. - Telephone	-	3.50
Rent - Parking Lot	0	63
Rent & Deposit - Vivid Green	-	5,000
Retirees' Health Ins./COBRA Reimb.	10,537	34,606
Sale - Scrap Materials/Metals	-	600
Sale - Surplus Equipment	-	600.00
UB - Bad Debt Recovery	-	-
UB - Hydrant Rental Deposit	-	-
UB - Mainline Connection Charge	-	-
UB - Meter Installations	-	-
UB - Retail Connection Charge	-	-
UB - Water Processing Fees	90	390
Ruth Area		
Fees - Buffer Strip ROW License	-	-
Fees - Buffer Strip/PG&E ROW	-	-
Lease - Don Bridge	-	-
Permit - RLCSD-Water System	-	-
Permit - Ruth Area Water Use	-	100
Rent - Ruth Cabin	-	480
Sale - Merchantable Timber	-	-
Sale - Surplus Gravel	-	-
TOTAL MISCELANEOUS REVENUE	11,955	58,498

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
MONTHLY EXPENDITURE REPORT - PAGE 1 OF 3
January 31, 2020

58% Of Budget Year

SALARY AND EMPLOYEE BENEFIT EXPENDITURES (S. E. B.)

	Month-to-Date	Year-to-Date	Prior Year	Budget	% of Budget
Compensation					
1. Wages - Regular	155,111.68	1,057,667.52	1,072,814.20	2,310,391	
2. Wages - Sick	5,958.05	33,462.83	3,030.88		
3. Wages - Vacation	10,542.57	81,489.52	3,398.73		
Subtotal	171,612.30	1,172,619.87	1,079,243.81	2,310,391	51%
4. Wages - Overtime	1,131.42	13,108.32	16,582.82	30,000	
5. Wages - Holiday (Worked)	2,927.66	7,827.73	15,759.96	15,000	
Subtotal	4,059.08	20,936.05	32,342.78	45,000	47%
6. Wages - Part-Time	2,484.66	19,223.67	25,025.02	74,329	26%
7. Wages - Shift Diff	675.00	5,492.59	5,559.00	11,000	50%
8. Wages - Standby	7,524.08	54,730.32	47,508.31	81,000	68%
9. Director Compensation	1,120.00	12,240.00	13,680.00	26,000	47%
10. Secretarial Fees	262.50	1,837.50	1,837.50	3,200	57%
11. Payroll Tax Expenses	19,234.51	102,235.62	96,082.35	189,744	54%
Subtotal	31,300.75	195,759.70	189,692.18	385,273	51%
Employee Benefits					
12. Health, Life,& LTD Ins.	65,624.86	344,893.46	423,587.18	734,849	47%
13. Air Medical Insurance	-	1,950.00	1,820.00	2,145	91%
14. Retiree Medical Insurance	14,788.87	86,606.59	78,975.90	95,849	90%
15. Employee Dental Insurance	2,706.48	16,651.68	19,808.16	39,399	42%
16. Employee Vision Insurance	593.92	4,194.56	4,547.20	7,350	57%
17. Employee EAP	109.76	499.86	526.40	1,116	45%
18. 457b District Contribution	2,600.00	18,250.00	18,300.00	30,600	60%
19. CalPERS Expenses	24,328.11	352,795.66	355,203.00	371,137	95%
20. Workers Comp Insurance	22,559.12	65,776.14	32,469.00	83,101	79%
Subtotal	133,311.12	891,617.95	935,236.84	1,365,546	65%
TOTAL S.E.B	340,283.25	2,280,933.57	2,236,515.61	4,106,210	56%

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
MONTHLY EXPENDITURE REPORT - PAGE 2 OF 3
January 31, 2020

SECTION J2a PAGE NO. 7

58% Of Budget Year

SERVICE & SUPPLY EXPENDITURES (S & S)

	Month-to-Date	Year-to-Date	Prior Year	Budget	% of Budget
Operations & Maintenance					
1. Auto Maintenance	5,397.02	30,318.62	29,452.43	40,000	76%
2. Engineering	6,221.50	19,860.00	26,963.02	75,000	26%
3. Lab Expenses	1,038.45	6,112.83	8,225.54	75,000	8%
4. Maintenance & Repairs					
General	2,508.68	5,670.86	33,434.99	58,000	10%
TRF	1,464.95	6,538.19	23,079.40	15,000	44%
Subtotal	*3,973.63*	*12,209.05*	*56,514.39*	*73,000*	17%
5. Materials & Supplies					
General	1,145.58	21,966.89	16,465.08	30,000	73%
TRF	8,260.52	17,949.91	12,171.97	40,000	45%
Subtotal	*9,406.10*	*39,916.80*	*28,637.05*	*70,000*	57%
6. Radio Maintenance	524.28	3,650.16	13,489.72	10,500	35%
7. Ruth Lake License	-	1,500.00	1,500.00	1,500	100%
8. Safety Equip./Training					
General	1,354.98	9,269.76	4,498.48	22,000	42%
TRF	-	463.84	1,266.07	2,000	23%
Subtotal	*1,354.98*	*9,733.60*	*5,764.55*	*24,000*	41%
9. Tools & Equipment	306.53	2,675.25	2,755.77	3,000	89%
10. USGS Meter Station	-	-	-	8,200	0%
Operations Subtotal	*28,222.49*	*125,976.31*	*173,302.47*	*380,200*	33%
General & Administration					
11. Accounting Services	-	950.00	4,445.00	18,000	5%
12. Bad Debt Expense	-	-	358.40	-	0
13. Dues & Subscriptions	40.00	28,134.78	24,675.93	26,000	108%
14. General Manager Training	-	2,315.18	197.44	3,000	77%
15. IT & Software Maintenance	4,680.09	17,540.07	13,199.47	29,000	60%
16. Insurance	-	77,863.95	39,911.25	105,000	74%
17. Internet	817.44	4,848.29	6,104.66	11,000	44%
18. Legal Services	11,233.50	39,204.75	28,928.25	35,000	112%
19. Miscellaneous	1,193.24	13,150.46	7,805.52	11,500	114%
20. Office Building Maint.	1,111.85	7,187.98	7,745.47	16,000	45%
21. Office Expense	8,451.05	41,948.47	21,823.89	40,500	104%
22. Professional Services	-	3,357.08	8,949.15	20,000	17%
23. Property Tax	-	945.00	945.00	1,100	86%

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
MONTHLY EXPENDITURE REPORT - PAGE 3 OF 3
January 31, 2020

SECTION J20, PAGE NO. 8

58% Of Budget Year

SERVICE & SUPPLY EXPENDITURES (con't)	Month-to-Date	Year-to-Date	Prior Year	Budget	% of Budget
24. Regulatory Agency Fees	3,276.00	72,073.59	64,025.67	139,000	52%
25. Ruth Lake Programs	-	-	-	5,000	0%
26. Safety Apparel	-	3,262.79	2,868.74	3,000	109%
27. Technical Training	-	5,830.06	3,756.19	14,500	40%
28. Telephone	3,391.48	27,828.60	30,510.17	50,000	56%
29. Travel & Conference	1,769.33	9,657.70	3,672.14	25,000	39%
Gen. & Admin. Subtotal	*35,963.98*	*356,098.75*	*269,922.34*	*552,601*	64%
Power					
30. Essex - PG & E	53,543.34	414,867.12	371,042.99		
31. 2Mw Generator Fuel	-	21,196.12	8,756.35		
Subtotal Essex Pumping	53,543.34	436,063.24	379,799.34		
32. All other PG & E	9,828.25	41,117.97	(13,750.58)		
Subtotal All Power	*63,371.59*	*477,181.21*	*366,048.76*	680,800	70%
Total Service and Supplies incl. Power	127,558.06	959,256.27	809,273.57	1,613,601	59%

PROJECTS, FIXED ASSETS & CONSULTING SERVICES

	Month-to-Date	Year-to-Date	Budget	% of Budget
	111,773.00	902,515.00	11,347,003.00	8%
GRAND TOTAL EXPENSES	579,614.31	4,142,704.84	3,045,789.18	17,066,814	24%
33. Debt Service - SRF Loan	-	273,668.48	273,668.48	547,337	50%
34. Debt Service - US Bank	-	81,094.05	81,094.05	162,200	50%
TOTAL EXPENSES WITH DEBT SERVICE					
	580,451.25	4,507,676.27	3,400,551.71	17,776,350	
OTHER EXPENSES					
35. ReMat Consultant Exp.	836.94	10,208.90	5,956.66		

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
PROJECT PROGRESS REPORT
January 31, 2020

58% *Of Budget Year*

A. CAPITAL PROJECTS

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
1	12kV Grant (Grant Funded) 2018/19 *(FEMA Grant and Advanced Charges)*	7,180	155,293	1,825,250	9%
2	Chlorine Scrubber Grant *(FEMA Grant and Advanced Charges)*	0	0	1,340,000	0%
3	TRF Emergency Generator Grant *(FEMA Grant, Adv. Charges, and Current Muni Charges)*	0 <<Wait-Listed 11/22/2019>>	0	1,925,000	0%
4	Collector 2 Rehabilitation Grant *(NCRP Prop I Grant, Adv. Charges, and Current Muni Charges)*	0	0	1,225,000	0%
5	3x Tank Seismic Retro Grant *(FEMA Grant, Adv. Charges, and Current Muni Charges)*	0	0	2,830,000	0%
6	TRF Line Shed 5	0	0	28,250	0%
7	Ruth Residence Roof	0	20,963	30,000	70%
8	Collector 4 Emergency Repairs	0	62,480	0	0
	TOTAL CAPITAL PROJECTS	**7,180**	**238,736**	**9,203,500**	**3%**

B. FIXED ASSET PROJECTS

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
9	Essex - Admin Computers	0	3,107	4,750	65%
10	Customer Service Vehicle (Unit 3)	32,947	32,947	60,750	54%
11	SCBA Upgrade and Additional Equip	0	2,771	19,750	14%
12	Laptop SCADA Software Upgrade	0	0	4,500	0%
13	Replacement of UPS's (Phase 2)	0	49	28,000	0%
14	Fleet Maintenance Equipment	0	2,365	3,500	68%
15	Electrical Voltage Tools and Safety Equip	1,555	1,555	3,250	48%
16	Traffic Control Equipment	0	3,210	4,000	80%
17	Vegetation Management Equipment	0	0	4,250	0%
18	Portable Radio Replacements	0	4,862	4,750	102%
19	Meter Reader Handheld Unit	0	0	4,500	0%
20	Job Boxes	0	1,874	2,250	83%
21	Pipe Tapping Machine	0	3,494	3,750	93%
22	Grapple Attachment for JD 110	0	0	4,000	0%
23	18,000 Lb. Excavator	0	0	124,343	0%
24	Hydrant Meter and Backflow Preventer	0	0	2,250	0%

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
PROJECT PROGRESS REPORT - PAGE 2 OF 6
January 31, 2020

58% *Of Budget Year*

B. FIXED ASSET PROJECTS (con't)

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
1	N-Poly Pump Skid Replacement *(Treatment Facility Project)*	0	0	12,250	0%
2	TRF Radio System Cabinet *(Treatment Facility Project)*	4,471	7,080	8,500	83%
3	Air Actuated Chemical Transfer Pump *(Treatment Facility Project)*	0	0	2,250	0%
4	Eureka - Administrative Computers	3,248	3,796	6,250	61%
5	File Cabinet Replacement	0	0	2,000	0%
6	Eureka Office ADA Upgrades	0	8,301	20,000	42%
7	Ruth SCADA Software Upgrade	0	0	4,750	0%
8	WISE Pump Sequencing Project	1,115	1,115	0	0%
	TOTAL FIXED ASSET PROJECTS	**43,336**	**76,527**	**334,593**	**23%**

C. MAINTENANCE PROJECTS

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
9	Pipeline Maintenance	0	870	12,750	7%
10	12 kV Electric System Maintenance	0	0	4,000	0%
11	Main Line Meter Flow Calibration	0	0	10,000	0%
12	Technical Support and Software Updates	0	9,974	18,000	55%
13	Generator Services	334	380	3,500	11%
14	TRF Generator Service	116	294	500	59%
15	Hazard & Diseased Tree Removal	0	0	5,000	0%
16	Cathodic Protection	0	2,644	6,500	41%
17	Maintenance Emergency Repairs	0	10,395	50,000	21%
18	Fleet Paint Repairs	0	0	5,000	0%
19	Lab Instrument Calibration (Particle Counter)	0	936	1,250	75%
20	Chlorine Solution Line Replacement	0	0	10,500	0%
21	Paint Buildings at Winzler Control Center	0	131	2,250	6%
22	Chlorine Booster Pump Rebuild Kits	0	0	8,000	0%
23	Fleet Emergency Safety Beacons (Phase 2)	0	1,994	2,000	100%
24	Upgrade Essex Alarm Systems	0	0	4,750	0%
25	Cat 420 Backhoe Tires	0	0	2,250	0%
26	Gates at I/W Reservoir and SBPS	0	0	3,000	0%
27	TRF Limitorque Valve Retrofit Supplies *(Treatment Facility Project)*	0	8,623	10,250	84%
28	TRF Water Quality Instrumentation Inventory *(Treatment Facility Project)*	0	2,466	15,000	16%

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
PROJECT PROGRESS REPORT - PAGE 3 OF 6
January 31, 2020

58% *Of Budget Year*

C. MAINTENANCE PROJECTS (con't)

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
1	TRF Rapid Mix Pump Rebuild Kit *(Treatment Facility Project)*	0	0	2,250	0%
2	TRF Flow Meter Test/Calibration (Phase 1) *(Treatment Facility Project)*	0	0	6,250	0%
3	Ruth Hydro Brush Abatement	0	0	6,500	0%
4	Howell Bunger Valve Inspection	0	0	1,110	0%
5	Ruth LTO Insurance	0	0	5,000	0%
6	Ruth Log Boom Inspection	0	130	1,000	13%
7	Hydro Plant Synchronizer Tuning	0	0	5,250	0%
8	Hydro Crane Rail and Lighting	0	0	5,000	0%
9	Ruth HQ Dock Decking	0	9,682	13,750	70%
10	Ruth Dead/Dying Tree Removal	0	0	20,000	0%
11	Ruth Slide Gate Hydraulic Oil	0	5,335	8,000	67%
	TOTAL MAINTENANCE PROJECTS	450	53,853	248,610	22%

D. PROFESSIONAL & CONSULTING SERVICES

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
12	Crane Testing/Certification	0	7,787	10,000	78%
13	Chlorine System Maintenance	0	7,713	16,750	46%
14	Backflow Tester Training	380	380	3,000	13%
15	Hydro Plant Electrical and Maintenance Insp.	0	0	2,050	0%
16	Crane Operator Re-Certification	0	2,084	3,000	69%
17	EAP Tabletop Exercise	0	15,671	12,000	131%
18	Essex Mad River Cross-Sectional Survey	0	9,365	10,000	94%
19	Technical Training	0	80	23,250	0%
20	O & M Training	0	0	20,000	0%
21	Essex Server B/U (Monthly Service Fees)	0	0	4,250	0%
22	Public Education Funds	0	1,000	5,000	20%
23	Electrical Technical Training	0	2,821	13,250	21%
24	SCADA Programming License	0	5,625	12,750	44%
25	Col. 2 Underground 12Kv Power/Fiber Optic	0	0	24,000	0%
26	Essex Control Building Expansion Plans & Specs	0	0	46,000	0%
27	299 Anode Bed Refurbishment	3,664	3,664	25,000	15%
28	Streambed Flow Enhancement Grant	9,974	66,422	612,700	11%
29	Annual PARS Contribution (FY20)	0	50,000	50,000	100%
30	Grant Applications Assistance	0	7,181	20,000	36%

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
PROJECT PROGRESS REPORT - PAGE 4 OF 6
January 31, 2020

58% *Of Budget Year*

D. PROFESSIONAL & CONSULTING SERVICES (CON'T)

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
1	Gravel Bar Work and Survey (PS 6)	0	0	76,100	0%
2	Water Resource Planning Assistance	0	0	5,000	0%
3	Climate Ready Grant	0	2,000	2,000	100%
4	Comp DW Pipeline Fitness	0	0	194,700	0%
5	FERC Dam Safety Surveillance (DSSMR)	0	383	5,000	8%
6	FERC Chief Dam Safety Engineer	0	3,665	10,000	37%
7	Dam Spillway Wall Monument Survey	1,439	11,110	14,000	79%
8	Matthews Dam Monument Survey	1,301	8,600	9,000	96%
9	Left Abutment Slide Area Survey	6,254	6,333	11,000	58%
10	Spillway/Dam Inspection/Reporting Assist.	0	4,503	10,000	45%
11	GHD - Log Boom Inspection	0	3,786	4,000	95%
	TOTAL PROF/CONSULTING SERVICES	**23,012**	**220,171**	**1,253,800**	**17.6%**

E. INDUSTRIAL SYSTEM PROJECTS

		MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
12	Rebuild River Weir	0	238	75,000	0.3%
13	Refurbish PS-6 (Phase 1)	0	0	0	0
14	Water to PS6 During Low-Flow Months	0	0	13,250	0%
15	I/W System Evaluation Memo	0	0	26,000	0%
16	Industrial and Domestic System Intertie	0	0	11,000	0%
17	Surge Tower Replacement 2018/19 *(FEMA Grant, Adv. Charges, and ReMat Funds)*	0	82,407	0	0
18	Industrial - Nordic	0	339	0	0
	TOTAL INDUSTRIAL SYSTEM PROJECTS	**0**	**82,983**	**125,250**	**66.3%**

F. CARRY-OVER PROJECTS FROM PRIOR YEAR

19	Collector 5 Security & Anti-Vandalism Measures	0	0	7,500	0%
20	Mainline Valve Replacement FY17/18	0	0	50,000	0%
21	Ruth HQ Installation of Power Pole 2018/19	0	80	3,750	2%
22	Ruth Hydro Relay Replacement-Phase 2	32,858	32,858	120,000	27%
23	Storm Damage 2019	0	25,514	0	0
24	Ruth Cabin/Bunkhouse Replacement	0	24,045	0	0
	CARRYOVER PROJECTS TOTAL	**32,858**	**82,496**	**181,250**	**46%**

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

PROJECT PROGRESS REPORT - PAGE 5 OF 6

58% *Of Budget Year*

January 31, 2020

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
PROJECTS GRAND TOTAL	106,836	754,767	11,347,003	7%
Less Projects Funded from Other Sources (Grants/Loans/Advanced Charges/Reserves)	17,155	221,714	9,234,293	2%
Project Charges to Customers (excluding Debt Service)	89,681	533,053	2,112,710	25%
PROJECTS W/OUT GRANT FUNDING	89,681	533,053	1,589,053	34%
USE OF ENCUMBERED FUNDS	4,937	147,749	200,062	74%

Total Project Budget:	11,347,003
Amount Charged to Customers:	2,112,710
Annual Debt Service Charges*:	162,200
Actual Customer Charges:	2,274,910

**Ranney Collector 3 and Techite Pipeline Replacement Projects were partially funded with a 10-year loan. Only the annual debt service for these projects is charged to customers.*

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
ENCUMBERED FUNDS RECONCILIATION REPORT
January 31, 2020

		MTD EXPENSES	YTD TOTAL	AMOUNT ENCUMBERED	REMAINING
	A. CAPITAL PROJECTS				
1	Essex Control Building Flooring Replacement	0	0	500	500
2	Collector Pump Oilers	0	330	300	(30)
	B. FIXED ASSET PROJECTS				
3	Collector 1 Electrical Upgrade	0	57,693	88,705	31,012
4	Ruth HQ Washroom Remodel	0	0	1,000	1,000
5	Ruth Hydro Oil & Paint Storage Lockers	0	2,710	2,750	40
6	Fleet Servicing Equipment	0	0	700	700
	C. MAINTENANCE PROJECTS				
7	Hazard & Diseased Tree Removal	0	7,750	6,500	(1,250)
8	Lead Free Brass Inventory	0	0	700	700
9	Replace 299 Cathodic Anode Well	4,937	16,000	16,000	0
10	Collector 2 Arc Flash Survey and Relay Test	0	2,200	3,600	1,400
	D. PROFESSIONAL & CONSULTING SERVICES				
11	Eureka - ADA Compliance Consultation	0	20,000	20,000	0
12	Hydro ReMat Electrical/Maintenance Insp.	0	0	2,000	2,000
13	Technical Training	0	0	1,600	1,600
	E. INDUSTRIAL SYSTEM PROJECTS				
14	Clarifier Feasibility Study	0	20,265	15,500	(4,765)
	F. CARRY-OVER PROJECTS FROM PRIOR YEAR				
15	Mainline Valve Replacement	0	20,801	38,666	17,865
	SPECIAL PROJECT ENCUMBERED FUNDS TOTAL	4,937	147,749	198,521	50,772
16	MAINTENANCE & REPAIRS			86	86
17	SAFETY EQUIP & TRAINING			1,030	1,030
18	TRF SAFTEY EQUIP & TRAINING			145	145
19	OFFICE SUPPLIES			280	280
	ALL ENCUMBERED FUNDS TOTAL	4,937	147,749	200,062	52,313

Vendor Name	Date Paid	Description	Amount Paid
101 Netlink			
101 Netlink	01/08/2020	*Ruth Data Link/Internet*	160.00
Total 101 Netlink:			160.00
ACWA/JPIA			
ACWA/JPIA	01/22/2020	*RETIREE MEDICAL*	14,485.31
ACWA/JPIA	01/22/2020	*Active Employee Medical Insurance*	758.34
ACWA/JPIA	01/22/2020	*Active Employee Dentall Insurance*	67.44
ACWA/JPIA	01/22/2020	*Active Employee Vision Insurance*	37.12
ACWA/JPIA	01/22/2020	*Active Employee EAP*	32.66
ACWA/JPIA	01/22/2020	*COBRA Dental*	229.32
ACWA/JPIA	01/22/2020	*COBRA Vision*	74.24
ACWA/JPIA	01/28/2020	*Workers Compensation October - December 2019*	22,559.12
Total ACWA/JPIA:			38,243.55
Advanced Security Systems			
Advanced Security Systems	01/08/2020	*Essex office Quarterly Alarm System Monitoring*	76.50
Total Advanced Security Systems:			76.50
Alboum & Associates			
Alboum & Associates	01/22/2020	*Ordinance 13 Appendix A Discontinuance Policy Translation*	1,522.08
Alboum & Associates	01/22/2020	*Discontinuance of Service Policy Translation - Fieldbrook-Glen*	1,522.08
Total Alboum & Associates:			3,044.16
Arcata Stationers			
Arcata Stationers	01/31/2020	*Essex office supplies*	348.90
Total Arcata Stationers:			348.90
Asbury Environmental Services			
Asbury Environmental Services	01/31/2020	*dispose of oil waste and absorbent pads*	296.31
Asbury Environmental Services	01/31/2020	*dispose of Ruth Hydro waste oil and absorbent pads*	269.38
Total Asbury Environmental Services:			565.69
AT & T			
AT & T	01/22/2020	*Eureka/Essex Landline*	35.05
AT & T	01/22/2020	*Arcata/Essex Landline*	35.05
AT & T	01/22/2020	*Samoa/Essex Land Line*	235.02
AT & T	01/22/2020	*Eureka Office Alarm Line*	225.22
AT & T	01/22/2020	*Eureka Office Alarm Line*	120.86
AT & T	01/22/2020	*Samoa Booster Pump Station*	123.37
AT & T	01/22/2020	*Valve Building Samoa*	225.21
AT & T	01/22/2020	*Eureka office*	495.56
AT & T	01/22/2020	*TRF*	218.64
AT & T	01/22/2020	*Ruth Hydro/Dataline*	217.82
AT & T	01/22/2020	*Essex office/Modem/Alarm System*	217.82
Total AT & T:			2,149.62
AT&T Advertising Solutions			
AT&T Advertising Solutions	01/31/2020	*white page listing*	21.00

Vendor Name	Date Paid	Description	Amount Paid
Total AT&T Advertising Solutions:			21.00
AT&T Long Distance			
AT&T Long Distance	01/22/2020	*Essex Control Long Distance*	20.34
AT&T Long Distance	01/22/2020	*Samoa Booster Pump Station Long Distance*	114.44
AT&T Long Distance	01/22/2020	*Eureka Office Long Distance*	6.79
AT&T Long Distance	01/22/2020	*Essex Water Quality Long Distance*	7.00
AT&T Long Distance	01/22/2020	*Ruth Hydro/Dataline Long Distance*	123.08
AT&T Long Distance	01/08/2020	*Eureka Office Long Distance*	150.83
Total AT&T Long Distance:			422.48
Buckles-Smith			
Buckles-Smith	01/31/2020	*TRF maintenance*	84.02
Total Buckles-Smith:			84.02
California Heating			
California Heating	01/31/2020	*TRF downspouts maintenance*	12.16
Total California Heating:			12.16
City of Eureka			
City of Eureka	01/08/2020	*Eureka office water/sewer*	92.90
Total City of Eureka:			92.90
Coastal Business Systems Inc.			
Coastal Business Systems Inc.	01/31/2020	*Eureka office copy and fax machine and maintenance agreement*	2,280.74
Total Coastal Business Systems Inc.:			2,280.74
Corey Borghino			
Corey Borghino	01/08/2020	*auto mileage reimbursement*	57.19
Total Corey Borghino:			57.19
Dave Perkins			
Dave Perkins	01/31/2020	*auto mileage reimbursement*	167.33
Total Dave Perkins:			167.33
David J. Corral			
David J. Corral	01/08/2020	*Wellness Grant 2019*	36.00
Total David J. Corral:			36.00
Diligent Corporation			
Diligent Corporation	01/31/2020	*software for Board Packet and Agenda*	2,000.00
Total Diligent Corporation:			2,000.00
Englund Marine Supply			
Englund Marine Supply	01/22/2020	*Unit 4 man bucket repair*	13.95

Vendor Name	Date Paid	Description	Amount Paid
Total Englund Marine Supply:			13.95
ESRI, Inc			
ESRI, Inc	01/31/2020	*Propress Payment 1 - Ruth Hydro Protective Relay Upgrade Pro*	32,857.65
Total ESRI, Inc:			32,857.65
Eureka Oxygen			
Eureka Oxygen	01/22/2020	*cylinder rental*	116.60
Total Eureka Oxygen:			116.60
Eureka Rubber Stamp			
Eureka Rubber Stamp	01/31/2020	*Eureka office supplies*	48.62
Total Eureka Rubber Stamp:			48.62
Eureka-Humboldt Fire Ext.,Co, Inc			
Eureka-Humboldt Fire Ext.,Co, Inc	01/31/2020	*Eureka office fire extinguisher*	248.47
Total Eureka-Humboldt Fire Ext.,Co, Inc:			248.47
Fastenal Company			
Fastenal Company	01/31/2020	*Collectors WISE Energy Project Upgrades*	375.79
Total Fastenal Company:			375.79
FEDEX			
FEDEX	01/31/2020	*Mail Info to PG&E for 12KV Upgrade Project*	27.58
Total FEDEX:			27.58
Forestry Suppliers, Inc			
Forestry Suppliers, Inc	01/22/2020	*Ruth HQ Equipmnet*	306.53
Total Forestry Suppliers, Inc:			306.53
Frontier Communications			
Frontier Communications	01/31/2020	*Ruth HQ Phone*	54.80
Frontier Communications	01/31/2020	*Ruth Hydro/Ruth Dataline*	179.21
Total Frontier Communications:			234.01
GHD			
GHD	01/31/2020	*Streambed Enhancement Grant*	5,830.75
GHD	01/31/2020	*12 KV Upgrade -Grant*	6,321.75
GHD	01/31/2020	*Cathodic Protection System Survey/Evaluation*	8,600.53
GHD	01/31/2020	*Ruth Dam-FERC DSSMR Survey*	1,439.00
GHD	01/31/2020	*Ruth Dam -Annual Survey*	1,300.50
GHD	01/31/2020	*Ruth Dam - Slide Survey*	6,254.00
GHD	01/31/2020	*General Engineering - Essex*	5,317.50
GHD	01/31/2020	*General Engineering - Eureka*	904.00
Total GHD:			35,968.03

Vendor Name	Date Paid	Description	Amount Paid
H.T. Harvey & Associates			
H.T. Harvey & Associates	01/08/2020	*Assistance with Streambed Flow Enhancement - Grant*	2,151.75
H.T. Harvey & Associates	01/31/2020	*Assistance with Streambed Flow Enhancement - Grant*	1,083.25
Total H.T. Harvey & Associates:			3,235.00
Hach Company			
Hach Company	01/31/2020	*Lab equipment repair*	33.45
Total Hach Company:			33.45
Harper Motors			
Harper Motors	01/31/2020	*Purchase new Unit 3*	32,946.80
Total Harper Motors:			32,946.80
Health Equity Inc			
Health Equity Inc	01/08/2020	*District HSA Contribution - 10 employees*	4,500.00
Health Equity Inc	01/22/2020	*District HSA Contributions- 2 employees*	2,748.97
Health Equity Inc	01/22/2020	*District HSA Contributions - 8 employees*	7,507.54
Health Equity Inc	01/22/2020	*HSA Admin Fee - 2 employees*	5.90
Health Equity Inc	01/22/2020	*HSA Admin Fee 8 employees*	23.60
Total Health Equity Inc:			14,786.01
Hensel Hardware			
Hensel Hardware	01/08/2020	*Superintendent's Office Heater*	46.64
Hensel Hardware	01/31/2020	*TRF gate and generator maintenance*	21.90
Hensel Hardware	01/31/2020	*TRF gate and generator maintenance*	4.98-
Hensel Hardware	01/31/2020	*vehicle maintenance*	132.50
Hensel Hardware	01/31/2020	*Unit 4 maintenance*	35.77
Hensel Hardware	01/31/2020	*Collector bug zapper*	91.12
Hensel Hardware	01/31/2020	*TRF downspouts repair*	.31
Hensel Hardware	01/31/2020	*TRF downspouts repair*	18.66
Hensel Hardware	01/31/2020	*maintenance shop supplies*	15.81
Total Hensel Hardware:			357.73
Henwood Associates, Inc			
Henwood Associates, Inc	01/08/2020	*Consultant Services Agreement - November 2019*	418.47
Total Henwood Associates, Inc:			418.47
Hopkins Technical Products, Inc			
Hopkins Technical Products, Inc	01/08/2020	*TRF chemical system maintenance*	336.51
Hopkins Technical Products, Inc	01/31/2020	*TRF N-Poly Parts*	371.00
Total Hopkins Technical Products, Inc:			707.51
Humboldt County Treasurer			
Humboldt County Treasurer	01/31/2020	*Fund No 3876 Account 800870*	45,611.43
Total Humboldt County Treasurer:			45,611.43
Humboldt Fasteners			
Humboldt Fasteners	01/31/2020	*drill repair estimate*	30.00
Humboldt Fasteners	01/31/2020	*Maintenance supplies*	70.70

Vendor Name	Date Paid	Description	Amount Paid
Total Humboldt Fasteners:			100.70
Humboldt Redwood Company, LLC			
Humboldt Redwood Company, LLC	01/22/2020	*Mt Pierce Lease site*	274.28
Total Humboldt Redwood Company, LLC:			274.28
Industrial Electric			
Industrial Electric	01/31/2020	*Generator installation*	6.50
Industrial Electric	01/31/2020	*Collector 3 lighting maintenance*	80.72
Total Industrial Electric:			87.22
J. Bruce Rupp			
J. Bruce Rupp	01/22/2020	*expense reimbursement - ACWA Region1 meeting*	474.47
Total J. Bruce Rupp:			474.47
JTN Energy, LLC			
JTN Energy, LLC	01/08/2020	*Consultant Services Agreement - Novemer 2019*	418.47
Total JTN Energy, LLC:			418.47
Mario Palmero			
Mario Palmero	01/24/2020	*Travel Advance - Backflow Training*	379.50
Total Mario Palmero:			379.50
Mendes Supply Company			
Mendes Supply Company	01/31/2020	*Eureka office maintenance*	39.60
Mendes Supply Company	01/31/2020	*Essex office maintenance*	121.57
Mendes Supply Company	01/31/2020	*Eureka office maintenance*	118.22
Total Mendes Supply Company:			279.39
Miller Farms Nursery			
Miller Farms Nursery	01/31/2020	*equipment maintenance*	25.73
Miller Farms Nursery	01/31/2020	*equipment maintenance*	22.56
Miller Farms Nursery	01/31/2020	*equipment maintenance*	86.09
Total Miller Farms Nursery:			134.38
Mission Linen			
Mission Linen	01/08/2020	*Uniform Rental*	110.31
Mission Linen	01/08/2020	*maintenance supplies*	23.00
Mission Linen	01/08/2020	*Uniform Rental*	87.42
Mission Linen	01/08/2020	*maintenance supplies*	34.50
Mission Linen	01/08/2020	*Uniform Rental*	110.31
Mission Linen	01/08/2020	*Uniform Rental*	92.33
Mission Linen	01/08/2020	*maintenance supplies*	58.56
Mission Linen	01/08/2020	*Uniform Rental*	117.90
Total Mission Linen:			634.33
Mitchell, Brisso, Delaney & Vrieze			
Mitchell, Brisso, Delaney & Vrieze	01/08/2020	*Legal Services- Ruth Area December 2019*	651.00

Vendor Name	Date Paid	Description	Amount Paid
Mitchell, Brisso, Delaney & Vrieze	01/08/2020	*Legal Services- December 2019*	232.50
Mitchell, Brisso, Delaney & Vrieze	01/08/2020	*Legal Services- December 2019 -12KV Project*	31.00
Total Mitchell, Brisso, Delaney & Vrieze:			914.50
Munnell & Sherrill, Inc.			
Munnell & Sherrill, Inc.	01/08/2020	*Unit 8 pump maintenance*	25.52
Total Munnell & Sherrill, Inc.:			25.52
Napa Auto Parts			
Napa Auto Parts	01/09/2020	*Unit 4 Service*	160.66
Napa Auto Parts	01/09/2020	*Unit 4 maintenance*	263.09
Napa Auto Parts	01/09/2020	*Unit 13 maintenance*	16.41
Napa Auto Parts	01/09/2020	*equipment maintenance*	10.13
Napa Auto Parts	01/09/2020	*Unit 4 maintenance*	56.17
Napa Auto Parts	01/09/2020	*Unit 4 maintenance*	52.06
Napa Auto Parts	01/31/2020	*TRF generator maintenance*	5.86
Napa Auto Parts	01/31/2020	*2 MW generator maintenance*	333.83
Napa Auto Parts	01/31/2020	*equipment maintenance*	63.44
Napa Auto Parts	01/31/2020	*Unit 4 repair*	56.93
Napa Auto Parts	01/31/2020	*Unit 4 repair*	52.06
Napa Auto Parts	01/31/2020	*equipment maintenance*	15.08
Napa Auto Parts	01/31/2020	*equipment maintenance*	87.82
Napa Auto Parts	01/31/2020	*Unit 1 repair*	145.26
Napa Auto Parts	01/31/2020	*equipment maintenance*	16.25
Napa Auto Parts	01/31/2020	*equipment maintenance*	36.65
Napa Auto Parts	01/31/2020	*Unit 1 repair*	128.11
Napa Auto Parts	01/31/2020	*Unit 4 repair*	138.19
Total Napa Auto Parts:			1,638.00
NEAC			
NEAC	01/08/2020	*Annual Membership*	40.00
Total NEAC:			40.00
Network Management Services			
Network Management Services	01/31/2020	*Eureka office computer assistance*	967.47
Network Management Services	01/31/2020	*Essential Care Computer Service for Eureka office*	1,144.39
Total Network Management Services:			2,111.86
Nilsen Co.			
Nilsen Co.	01/31/2020	*Ruth HQ fence repair*	101.03
Total Nilsen Co.:			101.03
North Coast Journal, Inc			
North Coast Journal, Inc	01/08/2020	*position advertisement -Electrician/Instrumentation Technician*	255.00
North Coast Journal, Inc	01/22/2020	*position advertisement -Electrician/Instrumentation Technician*	255.00
North Coast Journal, Inc	01/22/2020	*position advertisement -Electrician/Instrumentation Technician*	255.00
North Coast Journal, Inc	01/31/2020	*position advertisement -Electrician/Instrumentation Technician*	255.00
Total North Coast Journal, Inc:			1,020.00

Vendor Name	Date Paid	Description	Amount Paid
North Coast Laboratories			
North Coast Laboratories	01/08/2020	*lab tests*	75.00
North Coast Laboratories	01/08/2020	*lab tests*	75.00
North Coast Laboratories	01/08/2020	*lab tests*	95.00
North Coast Laboratories	01/08/2020	*lab tests*	95.00
North Coast Laboratories	01/08/2020	*lab tests*	95.00
North Coast Laboratories	01/08/2020	*lab tests*	95.00
North Coast Laboratories	01/08/2020	*lab tests*	285.00
North Coast Laboratories	01/08/2020	*lab tests*	95.00
North Coast Laboratories	01/08/2020	*lab tests*	95.00
Total North Coast Laboratories:			1,005.00
Northern California Safety Consortium			
Northern California Safety Consortium	01/08/2020	*membership fee*	75.00
Total Northern California Safety Consortium:			75.00
NTU Technologies, Inc			
NTU Technologies, Inc	01/31/2020	*TRF chemical supplies*	3,632.85
Total NTU Technologies, Inc:			3,632.85
Pacific Gas & Electric Co.			
Pacific Gas & Electric Co.	01/22/2020	*Eureka Office*	575.97
Pacific Gas & Electric Co.	01/22/2020	*Jackson Ranch Rectifier*	17.38
Pacific Gas & Electric Co.	01/22/2020	*299 Rectifier*	122.88
Pacific Gas & Electric Co.	01/22/2020	*West End Road Rectifier*	134.15
Pacific Gas & Electric Co.	01/22/2020	*TRF*	8,054.20
Pacific Gas & Electric Co.	01/22/2020	*Ruth Hydro Valve Control*	32.91
Pacific Gas & Electric Co.	01/22/2020	*Ruth Hydro*	41.68
Pacific Gas & Electric Co.	01/22/2020	*Samoa Booster Pump Station*	499.38
Pacific Gas & Electric Co.	01/22/2020	*Samoa Dial Station*	49.04
Pacific Gas & Electric Co.	01/22/2020	*Essex Pumping 12/1 - 12/31/2019*	53,543.34
Pacific Gas & Electric Co.	01/22/2020	*Ruth Bunkhouse*	300.66
Pacific Gas & Electric Co.	01/09/2020	*Interconnection Rule 21 12KV Upgrade*	800.00
Total Pacific Gas & Electric Co.:			64,171.59
Pacific Paper Co.			
Pacific Paper Co.	01/31/2020	*Eureka office supplies*	92.70
Pacific Paper Co.	01/31/2020	*Eureka office supplies*	16.48
Pacific Paper Co.	01/31/2020	*Eureka office supplies*	40.62
Total Pacific Paper Co.:			149.80
Pape Material Handling			
Pape Material Handling	01/22/2020	*equipment maintenance*	236.28
Total Pape Material Handling:			236.28
Peterson Tractor Co.			
Peterson Tractor Co.	01/31/2020	*Cat 420 backhoe bucket repair*	53.82
Total Peterson Tractor Co.:			53.82

Vendor Name	Date Paid	Description	Amount Paid
Picky, Picky, Picky, Inc			
Picky, Picky, Picky, Inc	01/31/2020	*Safety Boots for Jasson Klingonsmith*	244.11
Total Picky, Picky, Picky, Inc:			244.11
Pitney Bowes			
Pitney Bowes	01/22/2020	*refill postage meter*	500.00
Total Pitney Bowes:			500.00
PitStop Cleaning`			
PitStop Cleaning`	01/31/2020	*Eureka office cleaning*	160.00
Total PitStop Cleaning`:			160.00
Platt Electric Supply			
Platt Electric Supply	01/22/2020	*Generator Installation*	19.31
Platt Electric Supply	01/22/2020	*TRF Filter Area Lighting Maintenance*	227.31
Platt Electric Supply	01/22/2020	*Power Transfer Switch for Ruth Bunkhouse*	24.35
Platt Electric Supply	01/22/2020	*Chlorine Pump Room Lighting Maintenance*	120.41
Platt Electric Supply	01/22/2020	*Generator Installation*	66.12
Platt Electric Supply	01/31/2020	*TRF lighting maintenance*	256.28
Total Plått Electric Supply:			713.78
Rebecca J. Moyle			
Rebecca J. Moyle	01/22/2020	*auto mileage reimbursement*	27.50
Total Rebecca J. Moyle:			27.50
Recology Arcata			
Recology Arcata	01/22/2020	*Essex Garbage Service*	616.03
Total Recology Arcata:			616.03
Recology Humboldt County			
Recology Humboldt County	01/22/2020	*Eureka office garbage/recycling service*	90.72
Total Recology Humboldt County:			90.72
Sequoia Gas			
Sequoia Gas	01/08/2020	*Refill Ruth Bunkhouse propane*	294.48
Total Sequoia Gas:			294.48
Sitestar Nationwide Internet			
Sitestar Nationwide Internet	01/08/2020	*Essex Internet*	52.90
Total Sitestar Nationwide Internet:			52.90
Six Rivers Communications			
Six Rivers Communications	01/31/2020	*replace TRF radio cabinet and update wiring*	4,471.25
Total Six Rivers Communications:			4,471.25
Staples			
Staples	01/31/2020	*Ruth HQ office supplies*	47.71

Vendor Name	Date Paid	Description	Amount Paid
Staples	01/31/2020	*Ruth Hydro office supplies*	47.72
Staples	01/31/2020	*Eureka office supplies*	58.68
Total Staples:			154.11
Stillwater Sciences			
Stillwater Sciences	01/22/2020	*professional assistance -Streambed Flow Enhancement Project*	908.50
Total Stillwater Sciences:			908.50
Streamline			
Streamline	01/31/2020	*Website maintenance membership fee*	450.00
Total Streamline:			450.00
Sudden Link			
Sudden Link	01/22/2020	*TRF Internet*	23.65
Sudden Link	01/22/2020	*TRF Internet - Blue Lake SCADA Monitoring*	47.29
Sudden Link	01/22/2020	*TRF Internet - Fieldbrook-Glendale CSD*	47.29
Sudden Link	01/08/2020	*Fieldbrook-Glendale CSD Internet*	309.69
Sudden Link	01/08/2020	*Essex internet*	266.72
Total Sudden Link:			694.64
SWRCB Accounting Office			
SWRCB Accounting Office	01/22/2020	*Ruth Lake-Annual Permit Fee*	1,638.00
SWRCB Accounting Office	01/22/2020	*Essex - Annual Permit Fee*	1,638.00
Total SWRCB Accounting Office:			3,276.00
T.P. Tire Service, Inc			
T.P. Tire Service, Inc	01/08/2020	*flat repair Unit 3*	20.00
T.P. Tire Service, Inc	01/31/2020	*flat repair Unit 3*	20.00
T.P. Tire Service, Inc	01/31/2020	*Tires for Unit 4*	2,151.84
Total T.P. Tire Service, Inc:			2,191.84
Thatcher Company, Inc			
Thatcher Company, Inc	01/31/2020	*Credit tax over charges*	111.01-
Thatcher Company, Inc	01/31/2020	*replenish TRF chemicals*	4,738.68
Total Thatcher Company, Inc:			4,627.67
The Mill Yard			
The Mill Yard	01/31/2020	*TRF Filter Building maintenance*	78.10
The Mill Yard	01/31/2020	*TRF Filter Building maintenance*	42.84
The Mill Yard	01/31/2020	*Maintenance supplies*	13.66
Total The Mill Yard:			134.60
The Times-Standard			
The Times-Standard	01/08/2020	*notice of public hearing - Ordinance 13*	567.70
Total The Times-Standard:			567.70
Thomas Law Group			
Thomas Law Group	01/08/2020	*Legal Fees - December*	10,350.00

Vendor Name	Date Paid	Description	Amount Paid
Total Thomas Law Group:			10,350.00
Thrifty Supply			
Thrifty Supply	01/08/2020	*Fieldbrook-Glendale CSD meterrepair on Whittier*	104.98
Thrifty Supply	01/31/2020	*TRF chemical storage area and filter building gutter repair*	115.62
Thrifty Supply	01/31/2020	*Collector meter upgrades for WISE Energy Project*	739.43
Thrifty Supply	01/31/2020	*Fieldbrook-Glendale CSD meter repair on Whittier*	402.95
Total Thrifty Supply:			1,362.98
Trinity County General Services			
Trinity County General Services	01/31/2020	*Pickett Peak site lease*	250.00
Total Trinity County General Services:			250.00
Trinity County Solid Waste			
Trinity County Solid Waste	01/22/2020	*Ruth HQ dump fees*	45.87
Trinity County Solid Waste	01/22/2020	*Ruth Hydro dump fees*	45.87
Total Trinity County Solid Waste:			91.74
U.S. Bank Corporate Payment System			
U.S. Bank Corporate Payment System	01/22/2020	*Emergency Flashlight-Eureka Office*	56.80
U.S. Bank Corporate Payment System	01/22/2020	*ACWA Fall Conference*	23.08
U.S. Bank Corporate Payment System	01/22/2020	*ACWA Fall Conference*	19.88
U.S. Bank Corporate Payment System	01/22/2020	*ACWA Fall Conference- Lodging*	1,185.90
U.S. Bank Corporate Payment System	01/22/2020	*ACWA Fall Conference*	66.00
U.S. Bank Corporate Payment System	01/22/2020	*Eureka office supplies*	124.04
U.S. Bank Corporate Payment System	01/22/2020	*Electrical Voltage Tools and Safety Equipment*	1,555.13
U.S. Bank Corporate Payment System	01/22/2020	*Equipment Maintenance*	109.09
U.S. Bank Corporate Payment System	01/22/2020	*TRF Maintenance*	20.30
U.S. Bank Corporate Payment System	01/22/2020	*Essex office supplies*	88.05
U.S. Bank Corporate Payment System	01/22/2020	*Holiday Celebration*	57.24
U.S. Bank Corporate Payment System	01/22/2020	*Essex office supplies*	78.06
U.S. Bank Corporate Payment System	01/22/2020	*Eureka Office LapTop Computer*	1,686.65
U.S. Bank Corporate Payment System	01/22/2020	*Purchase Order Software - Monthly*	95.60
U.S. Bank Corporate Payment System	01/22/2020	*Eureka Office Computer Replacement*	1,560.86
U.S. Bank Corporate Payment System	01/22/2020	*Replace Locks Server Room/Janitor Closet*	730.60
U.S. Bank Corporate Payment System	01/22/2020	*Essex Fuel Pump Service*	54.37
U.S. Bank Corporate Payment System	01/22/2020	*DIN Connector w/LED Indicator*	52.67
U.S. Bank Corporate Payment System	01/22/2020	*TRF Generator Maintenance*	116.35
U.S. Bank Corporate Payment System	01/22/2020	*Essex office supplies*	161.28
U.S. Bank Corporate Payment System	01/22/2020	*Essex office supplies*	32.64
U.S. Bank Corporate Payment System	01/22/2020	*Essex office supplies*	37.53
U.S. Bank Corporate Payment System	01/22/2020	*Late Fee*	57.83
U.S. Bank Corporate Payment System	01/22/2020	*Position Advertisement Craigs List- Electrician Insutrument Tec*	80.00
Total U.S. Bank Corporate Payment System:			8,049.95
Valley Pacific Petroleum Servi, Inc			
Valley Pacific Petroleum Servi, Inc	01/09/2020	*cardlock fuel -Pumping & Control*	425.50
Valley Pacific Petroleum Servi, Inc	01/09/2020	*cardlock fuel - Water Quality*	425.50
Valley Pacific Petroleum Servi, Inc	01/09/2020	*cardlock fuel - Maintenance*	425.50
Valley Pacific Petroleum Servi, Inc	01/09/2020	*cardlock fuel - Humboldt Bay Customer Service*	110.63
Valley Pacific Petroleum Servi, Inc	01/09/2020	*cardlock fuel - Fieldbrook-Glendale CSD Customer Serivce*	314.87

Vendor Name	Date Paid	Description	Amount Paid
Total Valley Pacific Petroleum Servi, Inc:			1,702.00
Verizon Wireless			
Verizon Wireless	01/22/2020	*General Manager*	43.49
Verizon Wireless	01/22/2020	*Customer Service - Humboldt Bay*	13.01
Verizon Wireless	01/22/2020	*Customer Service - Fieldbrook-Glendale CSD*	37.06
Verizon Wireless	01/22/2020	*Operations 1*	.16
Verizon Wireless	01/22/2020	*Customer Service IPad-Humboldt Bay*	9.88
Verizon Wireless	01/22/2020	*Customer Service IPad - Fieldbrook-Glendale CSD*	28.13
Verizon Wireless	01/22/2020	*Unit 6 - Ruth Area*	61.67
Verizon Wireless	01/22/2020	*Unit 6 - Ruth Hydro*	61.68
Total Verizon Wireless:			255.08
Grand Totals:			338,251.44

Humboldt Bay Municipal Water District --Monthly Overtime Report-- Page: 1
Pay period dates: 1/1/2020 - 1/31/2020 Feb 05, 2020 01:21PM

Position Title	2-01 Overtime Emp Hrs	2-01 Overtime Emp Amt	2-02 Doubletime Emp Hrs	2-02 Doubletime Emp Amt
Customer Srvc	.50	$15	.00	$0
Total ADMIN:	.50	$15	.00	$0
Oper & Mnt Tech	.50	$21	.00	$0
Oper & Mnt Tech	1.00	$52	.00	$0
Total ESSEX:	1.50	$73	.00	$0
Hydro Oper Ruth	3.00	$143	.00	$0
Total RUTH:	3.00	$143	.00	$0
Grand Totals:	5.00	$231	.00	$0

SECTION J2b, PAGE NO. 1

California State Treasurer
Fiona Ma, CPA

Local Agency Investment Fund
P.O. Box 942809
Sacramento, CA 94209-0001
(916) 653-3001

February 05, 2020

LAIF Home
PMIA Average Monthly Yields

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

GENERAL MANAGER
P.O. BOX 95
EUREKA, CA 95501

Tran Type Definitions

Account Number: [redacted]

January 2020 Statement

Effective Date	Transaction Date	Tran Type	Confirm Number	Authorized Caller	Amount
1/6/2020	1/3/2020	RD	1626983	CHRIS HARRIS	436,000.00
1/15/2020	1/14/2020	QRD	1629116	SYSTEM	9.70

Account Summary

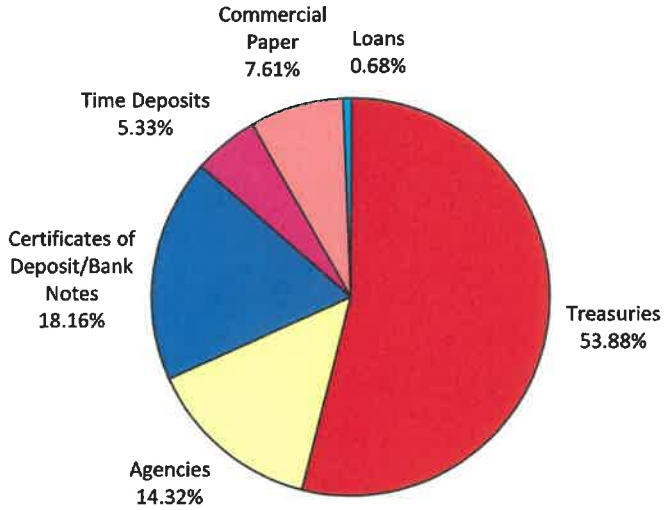
Total Deposit:	436,009.70	Beginning Balance:	1,687.78
Total Withdrawal:	0.00	Ending Balance:	437,697.48

PMIA/LAIF Performance Report as of 01/29/2020

Pooled Money Investment Account Portfolio Composition [1]

12/31/19

$88.9 billion



Percentages may not total 100% due to rounding

PMIA Average Monthly Effective Yields[1]

Dec 2019	**2.043**
Nov 2019	2.103
Oct 2019	2.190

LAIF Quarterly Performance

Quarter Ended 12/31/19

Apportionment Rate[2]:	2.29
Earnings Ratio[2]:	0.0000625008577897
Fair Value Factor[1]:	1.001770298
Daily[1]:	2.02%
Quarter to Date[1]:	2.11%
Average Life[1]:	226

PMIA Daily Rates[1]

Date	Daily Yield*	Quarter to Date Yield	Average Maturity (in days)
12/30/19	2.03	2.11	224
12/31/19	2.02	2.11	226
01/01/20	2.03	2.03	224
01/02/20	2.00	2.02	231
01/03/20	2.00	2.01	229
01/04/20	2.00	2.01	229
01/05/20	2.00	2.01	229
01/06/20	2.00	2.00	226
01/07/20	1.99	2.00	224
01/08/20	1.99	2.00	224
01/09/20	1.99	2.00	224
01/10/20	1.98	2.00	223
01/11/20	1.98	2.00	223
01/12/20	1.98	2.00	223
01/13/20	1.98	1.99	220
01/14/20	1.97	1.99	221
01/15/20	1.96	1.99	228
01/16/20	1.95	1.99	226
01/17/20	1.95	1.99	224
01/18/20	1.95	1.98	224
01/19/20	1.95	1.98	224
01/20/20	1.95	1.98	224
01/21/20	1.95	1.98	219
01/22/20	1.95	1.98	218
01/23/20	1.94	1.98	216
01/24/20	1.94	1.98	218
01/25/20	1.94	1.97	218
01/26/20	1.94	1.97	218
01/27/20	1.94	1.97	216
01/28/20	1.94	1.97	215
01/29/20	1.94	1.97	216

*Daily yield does not reflect capital gains or losses

View Prior Month Daily Rates

Notes: The apportionment rate includes interest earned on the CalPERS Supplemental Pension Payment pursuant to Government Code 20825 (c)(1) and interest earned on the Wildfire Fund loan pursuant to Public Utility Code 3288 (a).

Source:
(1) State of California, Office of the Treasurer
(2) State of Calfiornia, Office of the Controller

CalTRUST
c/o Ultimus Fund Solutions
PO Box 541150
Omaha, NE 68154-9150
www.caltrust.org
Email: CalTRUSTSupport@ultimusfundsolutions.com
Fax: 402-963-9094
Phone: 833-CALTRUST (225-8787)

SECTION 3c, PAGE NO. 1

Investment Account Summary

01/01/2020 through 01/31/2020

SUMMARY OF INVESTMENTS

Fund	Account Number	Total Shares Owned	Net Asset Value per Share on Jan 31 ($)	Value on Jan 31 ($)	Average Cost Amount ($)	Cumulative Unrealized Gain/(Loss) ($)
HUMBOLDT BAY MUNICIPAL WATER DISTRICT						
CalTRUST Short Term Fund		121,396.520	10.05	1,220,035.03	1,220,035.02	0.01
BlackRock Liquid Environmentally Aware Fund (LEAF)		9,073.880	1.0004	9,077.51	9,077.51	0.00
	Portfolios Total value as of 01/31/2020			**1,229,112.54**		

DETAIL OF TRANSACTION ACTIVITY

Activity Description	Activity Date	Amount ($)	Amount in Shares	Balance in Shares	Price per Share ($)	Balance ($)	Average Cost Amt ($)	Realized Gain/(Loss) ($)
CalTRUST Short Term Fund			**HUMBOLDT BAY MUNICIPAL WATER DISTRICT**				**Account Number:**	
Beginning Balance	01/01/2020			0.000	10.05	0.00		
Purchase	01/27/2020	1,219,600.00	121,353.234	121,353.234	10.05	1,219,600.00	0.00	0.00
Accrual Income Div Reinvestment	01/31/2020	435.02	43.286	121,396.520	10.05	1,220,035.03	0.00	0.00
Unrealized Gain/(Loss)						0.00		
Closing Balance as of	**Jan 31**			**121,396.520**	**10.05**	**1,220,035.03**		
BlackRock Liquid Environmentally Aware Fund (LEAF)			**HUMBOLDT BAY MUNICIPAL WATER DISTRICT**				**Account Number:**	
Beginning Balance	01/01/2020			0.000	1.0002	0.00		
Purchase	01/27/2020	9,075.39	9,071.761	9,071.761	1.0004	9,075.39	0.00	0.00
Accrual Income Div Reinvestment	01/31/2020	2.12	2.119	9,073.880	1.0004	9,077.51	0.00	0.00
Unrealized Gain/(Loss)						0.00		
Closing Balance as of	**Jan 31**			**9,073.880**	**1.0004**	**9,077.51**		

Please note that this information should not be construed as tax advice and it is recommended that you consult with a tax professional regarding your account.

CalTRUST Account Activity for All Funds from 1/6/2020 to 2/5/2020

Account Number:

Account Name: HUMBOLDT BAY MUNICIPAL WATER DISTRICT

Date	Description	Fund	# Shares	Price	Total	Running # Shares
1/27/2020	Purchase	CalTRUST Short Term Fund	121,353.2340	$10.05	$1,219,600.00	121,353.2340
1/27/2020	Purchase ( )	BlackRock Liq Environ Aware (LEAF)	9,071.7610	$1.00	$9,075.39	130,424.9950
1/31/2020	Accrual Income Div Reinvestment	CalTRUST Short Term Fund	43.2860	$10.05	$435.02	130,468.2810
1/31/2020	Accrual Income Div Reinvestment	BlackRock Liq Environ Aware (LEAF)	2.1190	$1.00	$2.12	130,470.4000
2/3/2020	Purchase	BlackRock Liq Environ Aware (LEAF)	513,128.1490	$1.00	$513,333.40	643,598.5490

SECTION D2C, PAGE NO. 2

OPERATIONS

Memo to: HBMWD Board of Directors
From: Dale Davidsen, Superintendent
Date: February 4, 2020
Subject: Essex/Ruth January 2020 Operational Report

Upper Mad River, Ruth Lake, and Hydro Plant

1. The flow at Mad River above Ruth Reservoir (Zenia Bridge) averaged 290 cfs. The low flow of 33 cfs on January 7th and the high flow of 2280 cfs on January 26th.

2. The conditions at Ruth Lake for January were as follows:

   The lake level on January 31st was 2655.02 feet which is:

   - 15.84 feet higher then December 31st , 2019
   - 0.78 feet higher than January 31st , 2018
   - 3.24 feet higher than the ten year average
   - 1.02 feet above the spillway

3. There were 9.46 inches of recorded rainfall for January at Ruth Headquarters.

4. Ruth Hydro produced 304,800 KWh. The hydro plant ran all month with 3 outages resulting in a loss of 7,108 KWh.

5. The discharge from the lake averaged 159 cfs with a high of 831 cfs on January 28th.

Lower Mad River, Winzler Control, and TRF

6. The river at Winzler Control Center for January had an average flow of 2785 cfs. The river flow reached a high flow of 10600 cfs on January 26th.

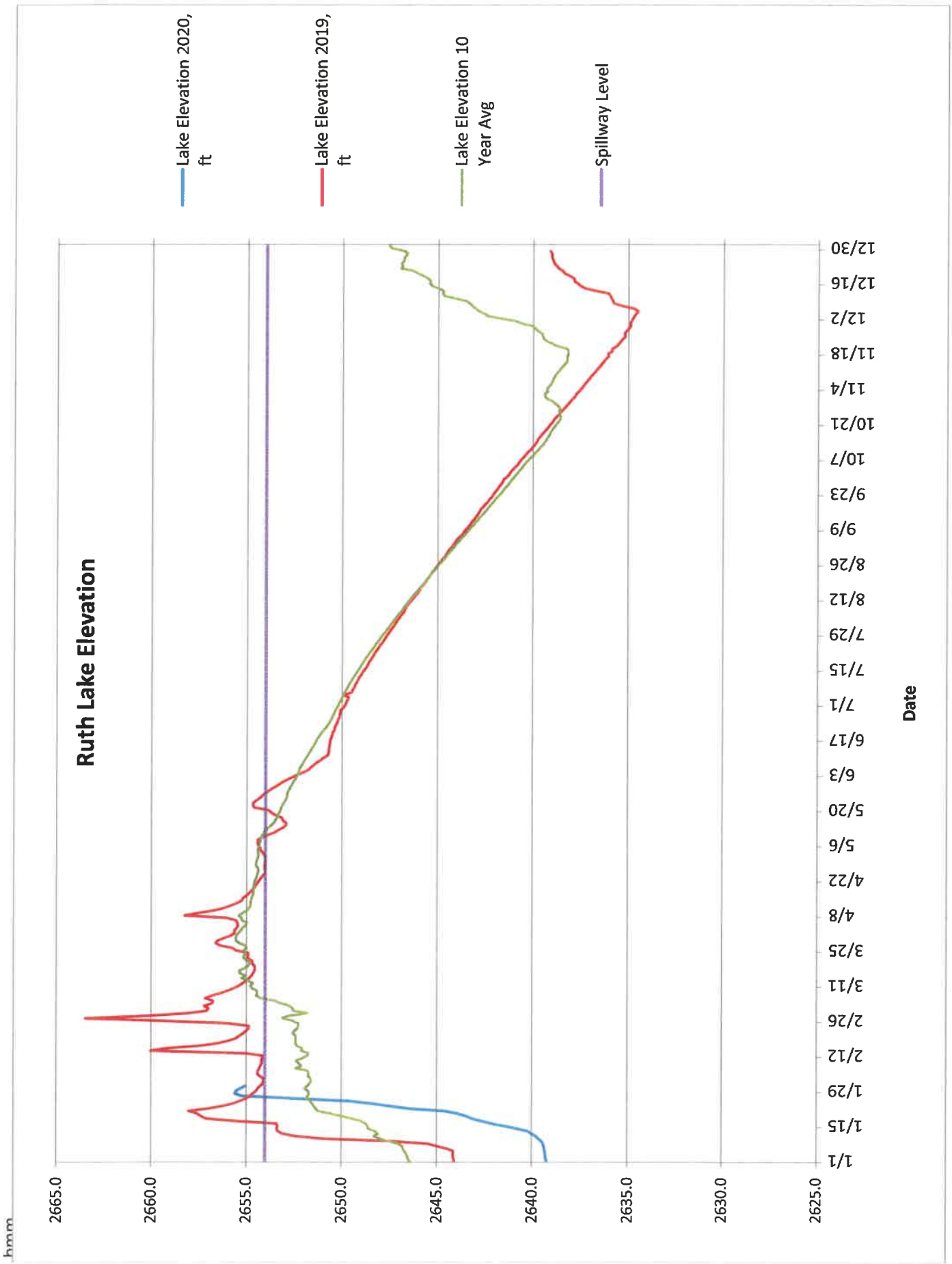
7. The domestic water conditions were as follows:

   - The monthly turbidity average was 0.06 NTU, which meets Public Health Secondary Standards.
   - As of January 31st, we pumped 232.146 million gallons at an average of 7.586 MGD.
   - The maximum metered daily municipal customer use was 8.288 MGD on January 5th.

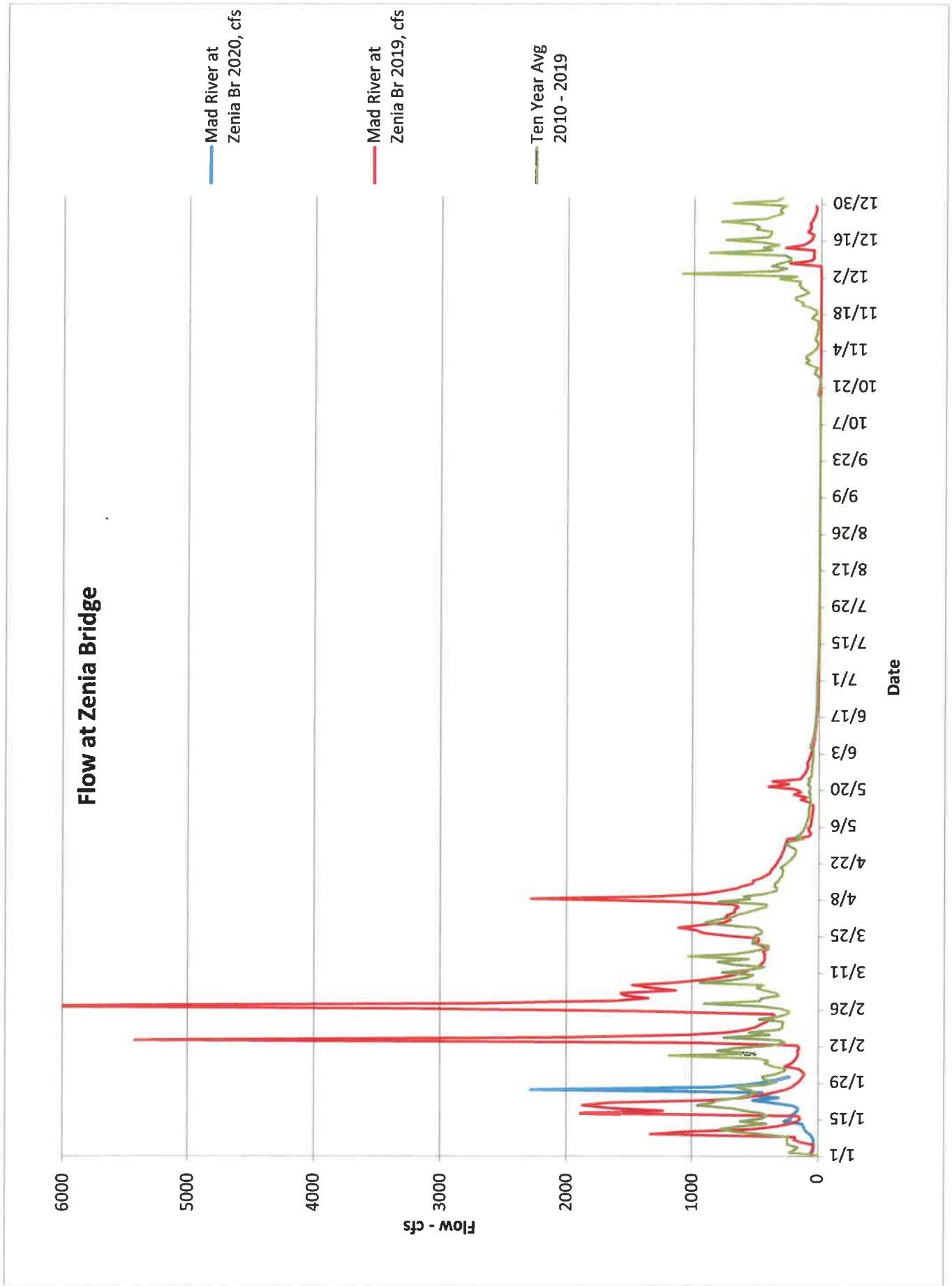
8. The Turbidity Reduction Facility ran 31 days in January.
9. The TRF conditions were as follows:
   - Average monthly filtered water turbidity was 0.06 NTU.
   - There were 60 backwashes on the TRF filters in January.

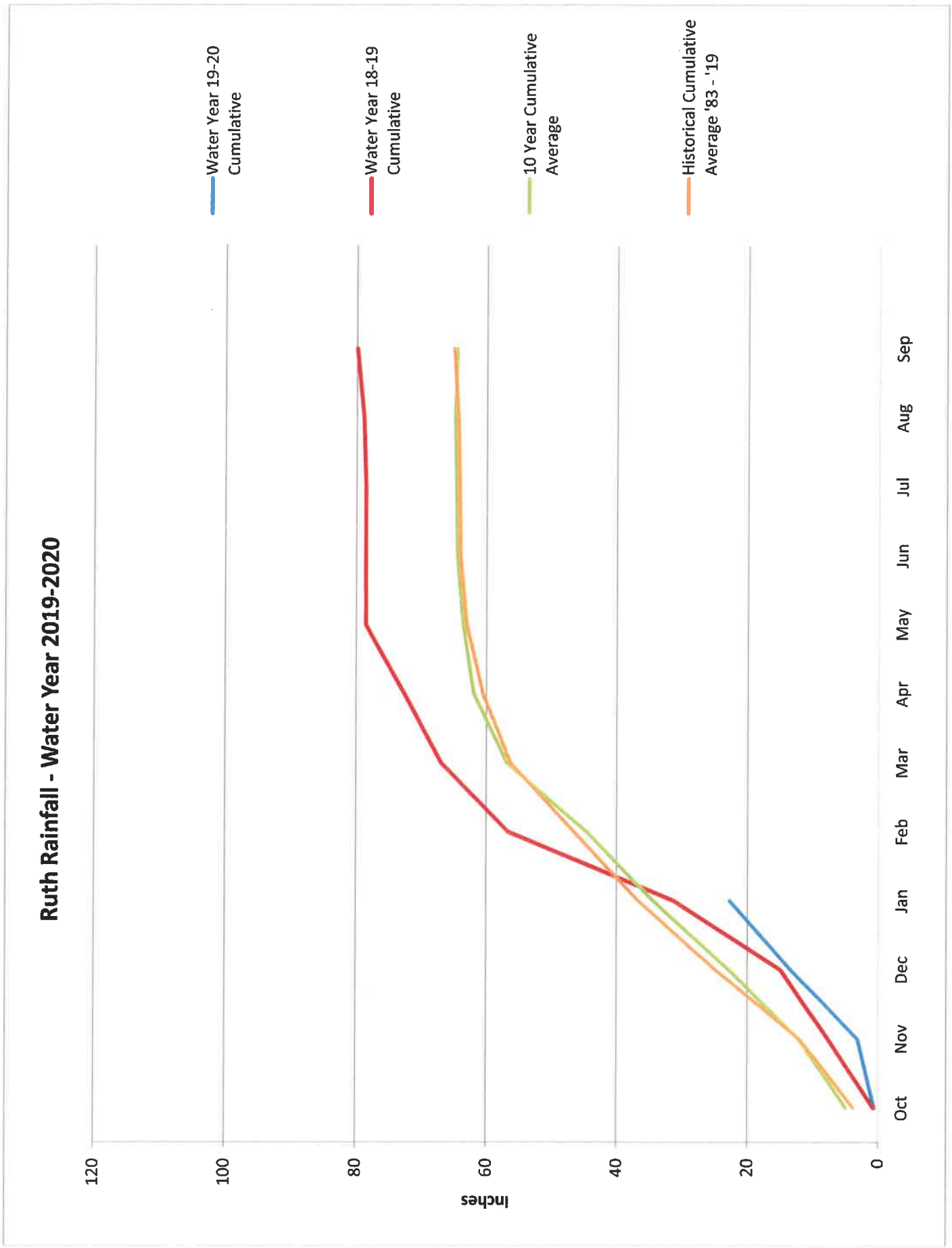
10. January 2nd – Completed installation of new N-Poly Skid
11. January 6th – I met with a contractor regarding possible remodel of Headquarters.

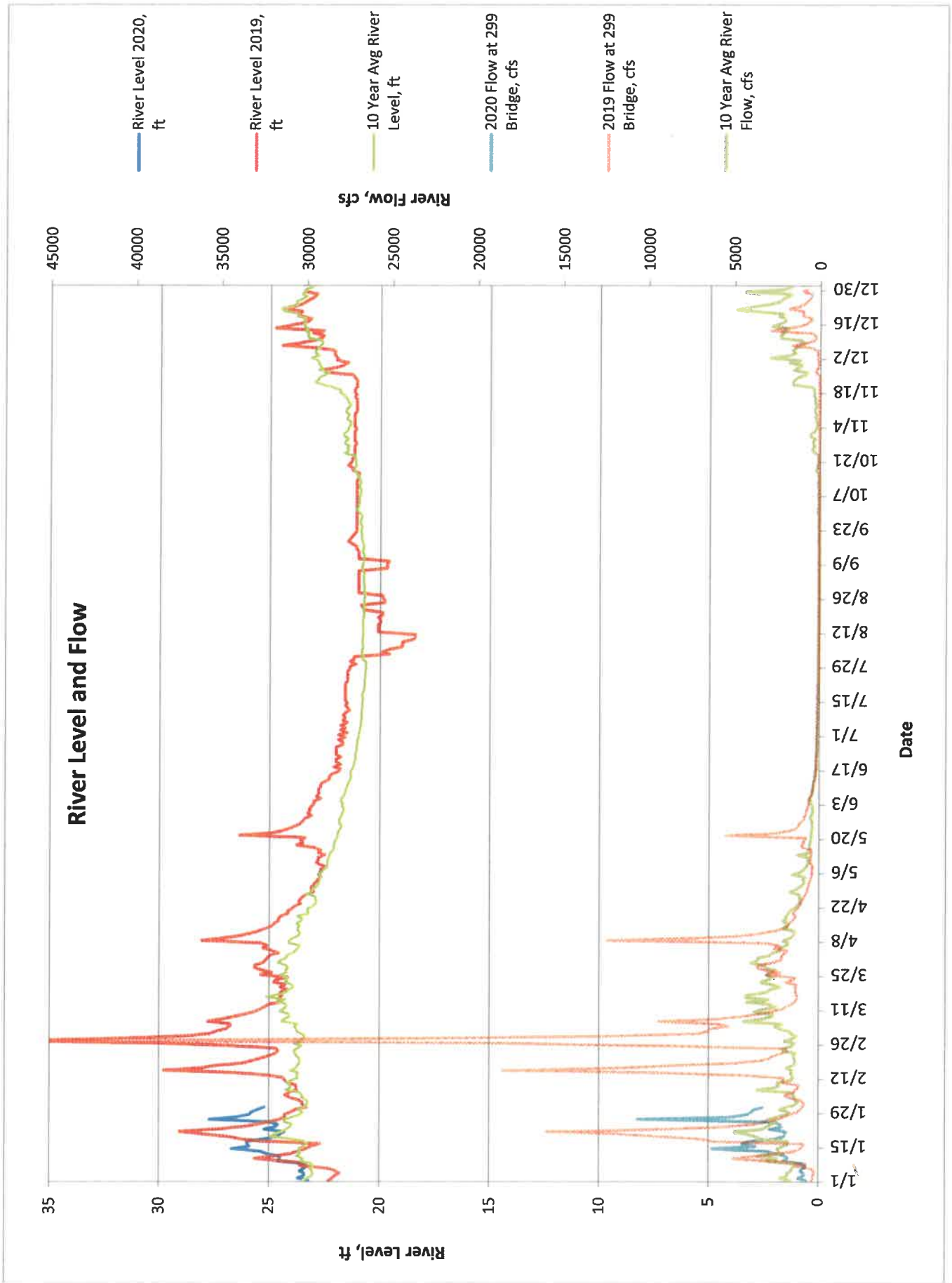
12. January 10th – Interview for Electrical position
13. January 13th – Conference call with GHD regarding Cathodic protection system
14. January 15th - Safety meetings
    - WIIPP
    - AQMD permits
    - EAP – Dam Safety plan
    - SCBA training
15. January 16th – Interview for Electrical Position
16. January 20th – Replace meter manifold on Whittier Ln. in Fieldbrook
17. January 21st – Interviews for Electrical Position
18. January 22nd – Conference call with Lincus regarding WISE program
19. January 23rd – Interview for Ruth Relief operator
20. January 24th – SB198 safety meeting
21. January 27th-31st – Mario went to Cross connection control training.
22. January 28th – 90 Day crane inspections
23. January 31st – 12 Kv kickoff meeting.
24. Current and Ongoing Projects
    - Working with RCEA and Lincus on the WISE energy efficiency project.
    - Routine annual equipment maintenance and services.

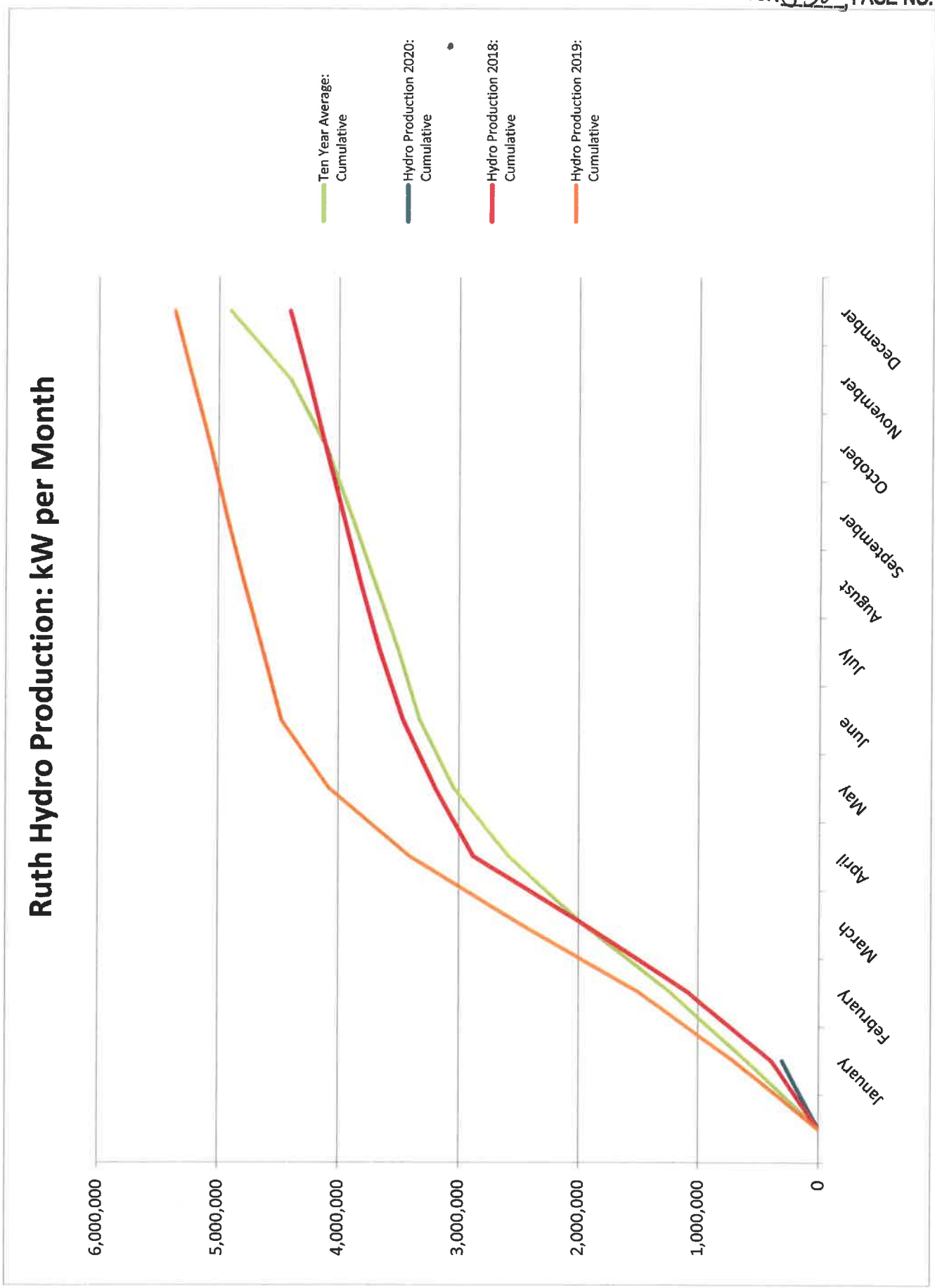

Ruth Lake Elevation
Lake Elevation 2020, ft
Lake Elevation 2019, ft
Lake Elevation 10 Year Avg
Spillway Level
2665.0
2660.0
2655.0
2650.0
2645.0
2640.0
2635.0
2630.0
2625.0
1/1
1/15
1/29
2/12
2/26
3/11
3/25
4/8
4/22
5/6
5/20
6/3
6/17
7/1
7/15
7/29
8/12
8/26
9/9
9/23
10/7
10/21
11/4
11/18
12/2
12/16
12/30
Date

hmm


Flow at Zenia Bridge
Mad River at Zenia Br 2020, cfs
Mad River at Zenia Br 2019, cfs
Ten Year Avg 2010 - 2019
Flow - cfs
6000
5000
4000
3000
2000
1000
0
Date
1/1
1/15
1/29
2/12
2/26
3/11
3/25
4/8
4/22
5/6
5/20
6/3
6/17
7/1
7/15
7/29
8/12
8/26
9/9
9/23
10/7
10/21
11/4
11/18
12/2
12/16
12/30


Ruth Rainfall - Water Year 2019-2020
Water Year 19-20 Cumulative
Water Year 18-19 Cumulative
10 Year Cumulative Average
Historical Cumulative Average '83 - '19
Inches
0
20
40
60
80
100
120
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep


River Level and Flow
River Level 2020, ft
River Level 2019, ft
10 Year Avg River Level, ft
2020 Flow at 299 Bridge, cfs
2019 Flow at 299 Bridge, cfs
10 Year Avg River Flow, cfs
River Level, ft
River Flow, cfs
Date
0
5
10
15
20
25
30
35
0
5000
10000
15000
20000
25000
30000
35000
40000
45000
1/1
1/15
1/29
2/12
2/26
3/11
3/25
4/8
4/22
5/6
5/20
6/3
6/17
7/1
7/15
7/29
8/12
8/26
9/9
9/23
10/7
10/21
11/4
11/18
12/2
12/16
12/30


Ruth Hydro Production: kW per Month
Ten Year Average: Cumulative
Hydro Production 2020: Cumulative
Hydro Production 2018: Cumulative
Hydro Production 2019: Cumulative
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
January
February
March
April
May
June
July
August
September
October
November
December

REDHEADED BLACKBELT
News, nature and community throughout the Emerald Triangle

RUTH LAKE OVERFLOWING (PHOTO AND VIDEO)

January 29, 2020 | Kym Kemp | 3 comments

Water pushed over the Ruth Dam Spillway yesterday. [Photo by Ed Johnson]

Recent storms, including a snowfall that covered the ground around Ruth Lake, have swelled Northern California rivers. On January 27th, Ruth Lake, which provides water for the Humboldt Bay Municipal Water District, reached 103% of capacity.

The photo above and the video below show water gushing over the spillway yesterday at the Ruth Lake dam.

CONTACT US

Email

HOW YOU CAN MAKE US SMILE

Donate

Search ...

Humboldt Bay Municipal Water District

To: Board of Directors
From: John Friedenbach
Date: February 7, 2020

Re: Ruth Headquarters Residence Remodel

Background / History

At the formation of the District in the 1950's, the District purchased the old Ruth school house and school teacher's house to maintain a permanent residence for the District's dam tender / Ruth area representative. These buildings were converted into the District' s Headquarters and Ruth Bunkhouse respectively. Headquarters has been maintained as employer provided housing to our Ruth area employee for the convenience of the employer/District. The recently retired District Headquarters resident employee was capable of and had performed a number of smaller room "remodels" over the years but had never undertaken a larger whole house project partly due to the fact that the family lived there and it would have been very hard to do the work while living in the same space. The former resident lived there for over 25 years and there is obviously general wear and tear from use over those years. Fortunately, the condition of the Headquarters building has not deteriorated to the same extent that the Bunkhouse had over the same period of ownership by the District. Nevertheless, the current condition of the Headquarters building requires some repairs and remodeling. (See the attached list of proposed remodel items) The primary items are insulation and wall and floor coverings. There are no major structural improvements proposed.

Discussion

Since the District is providing housing to our Ruth Area Representative for the employer's convenience, the District has an obligation to maintain the facility and provide a safe and reasonable living space for our employee stationed there. Some of the factors requiring District controlled housing include: a District controlled land line and radio communications for dam operations and emergency response; a local facility for District interaction with Lease Lot holders and the Ruth Lake Community Services District; and an area to store and maintain District equipment.

With the staff turnover in the Ruth Area Representative position in December, staff saw an opportunity to perform certain limited and necessary facility repairs and remodel while the Headquarters was vacant while utilizing the Ruth Cabin as a temporary living space for our new Ruth Area Representative. This was discussed at our January Board meeting. With the upcoming dam and hydro plant May maintenance and pending hydro protective relay project both requiring use of the Bunkhouse for staff and consultant occupancy, staff will now move Larry into Headquarters without any improvements.

The attached floor plan and list of remodel items delineate the repairs that staff have determined are necessary to maintain the Ruth Headquarters in a livable condition suitable to meet the standards of employer provided housing. Staff estimates that the repair costs will exceed $35,000, consequently requiring the District to comply with the public works procurement and competitive bidding requirements.

With Board authorization, staff will advertise for construction bids to perform the tasks listed on the attached Headquarters Residence Remodel Items, J3b page 3. Once the dam and hydro maintenance is completed and the hydro protective relay project is complete and we have received quotes for the desired remodeling, Larry will move back into the Bunkhouse during the Headquarters construction, assuming the Board authorizes the Headquarters remodel project to proceed.

Next Steps

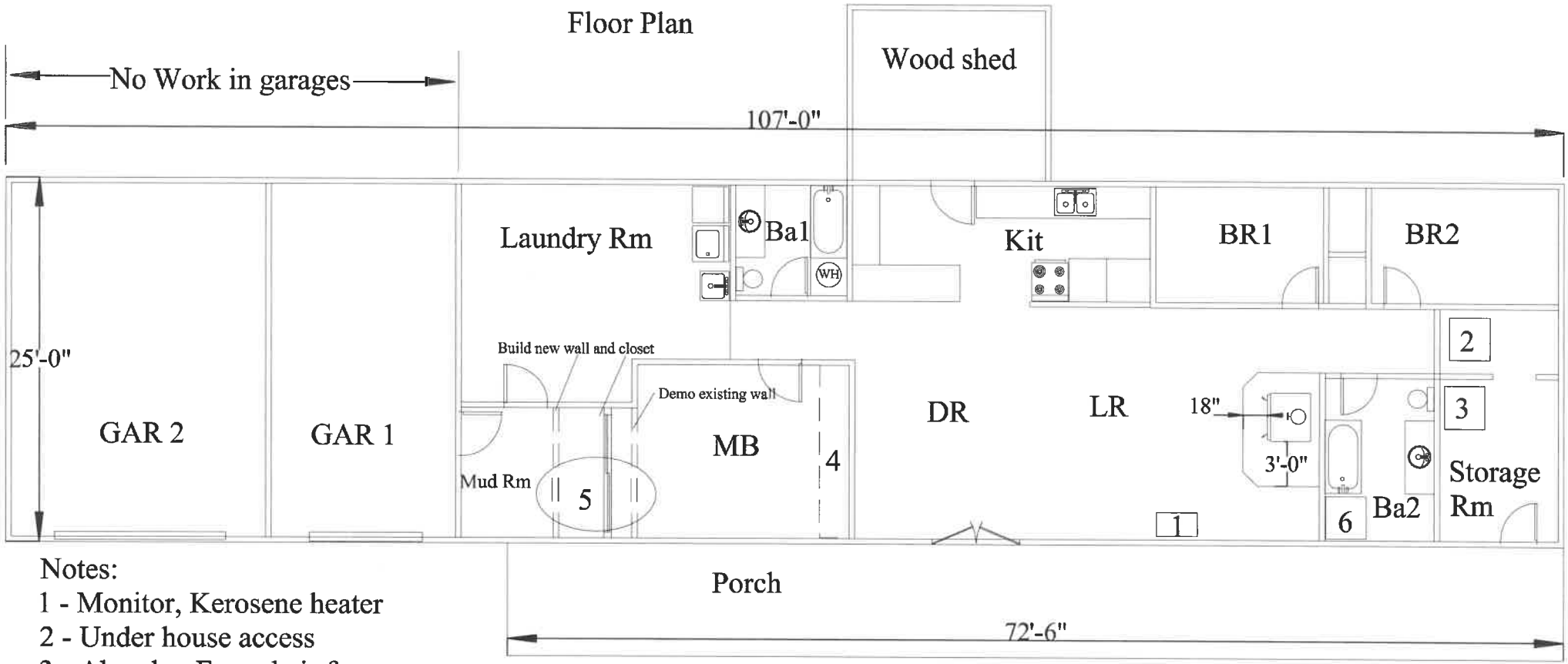
Staff will advertise for construction bids to perform the tasks listed on the attached Headquarters Residence Remodel Items and present any responses to the Board for consideration and authorization. Larry Raschein will move into Headquarters as soon as possible.

Headquarters Residence Remodel items

Room	Demo required	New flooring	New Sheetrock	Wall Insulation	Ceiling Insulation	Paint	Comments
Dining Room	No	No	Yes	No	Yes	Yes	Insulate ceiling, sheetrock ceiling / wrap beams.
Living Room	Yes	Yes	Yes	No	Yes	Yes	Insulate ceiling, sheetrock ceiling / wrap beams, Remove/Patch over furnace vent, Texture and Paint, Replace flooring, Bring wood stove installation up to code with .
Master Bed Room	Yes	Yes	Yes	Yes	Yes	Yes	Remove paneling, existing closet, Insulate outside wall, Demo false ceiling, Replace 2 fixed upper windows with sliding windows for ventilation, Extend bedroom/hall wall to ceiling, Insulate ceiling, sheetrock all walls and ceiling / wrap beams, Install new lighting, Install room to room fan in bedroom /dining room wall, Replace flooring, Install new door, Move wall and build new closet with bypass doors, Texture and Paint
Laundry Room	No	Yes*	No	No	No	Yes	*Lay laminate flooring and install mud room door already purchased by District. Paint all walls and ceiling. Inspect plumbing for washer and sink and repair and finish as needed. Inspect dryer electrical and dryer venting and repair and finish as needed.
Bath 1	Yes	Yes	Maybe some around repair	No	No	Yes	Remove flooring, Repair damage around toilet, Install new flooring, Paint
Kitchen	Yes	No	Yes	No	Yes	Yes	Insulate ceiling, Remove/Patch over furnace vent, Sheetrock ceiling / wrap beams, Smooth finish no texture, Paint
Bed Room 1	Yes	Yes	Yes	Yes	Yes	Yes	Remove paneling, Remove/Patch over furnace vent, Insulate outside wall, Insulate ceiling, sheetrock all walls and ceiling / wrap beams, Replace flooring , Texture and Paint, Install new lighting, Install new door,
Bed Room 2	Yes	Yes	Yes	Yes	Yes	Yes	Remove paneling, Remove/Patch over furnace vent, Insulate outside wall, Insulate ceiling, sheetrock all walls and ceiling / wrap beams, Replace flooring, Texture and Paint, Install new lighting, Install new door,
Bath 2	No	No	No	No	No	No	Build 84" tall linen cabinet, keeping access to shower plumbing.
Storage room	Yes	Yes	Yes	Yes	Yes	Yes	Remove existing furnace, Remove paneling, Inspect condition of wall framing and repair as needed, Frame in boarded up front window, Insulate outside walls, Sheet all walls with 1/2" plywood, Seal seams and paint.
Porch and sidewalks	Yes	Yes				Yes	Demo existing porch deck, build proper footing / framing and install Timber Tech decking. Add metal roofing to extend roof beyond roof support framing 3" to 4" or so. Paint roof support framing. Demo and replace concrete walkways from driveway to porch and porch to garage at East end of house.

SECTION J3b, PAGE NO. 3

Humboldt Bay Ruth Headquarters Residence
Floor Plan



Notes:

1 - Monitor, Kerosene heater
2 - Under house access
3 - Abandon Forced air furnace
4 - Demo existing closet
5 - Demo existing wall and move 5-1/2 feet and build new closet.
6 - Build linen cabinet, keep access to shower plumbing.

SECTION T3b PAGE NO. 4

Humboldt Bay Municipal Water District Ruth Headquarters			
TITLE: Headquarters Residence Floor Plan			
SIZE	CAGE CODE	AP # 020-320-02-00	REV
SCALE 1/8" = 1'		SHEET 1	

MANAGEMENT

CSDA BOARD OF DIRECTORS
CALL FOR NOMINATIONS - SEAT C

Deadline: March 26, 2020

The California Special Districts Association Elections and Bylaws Committee is looking for independent special district board members or their general managers who are interested in leading the direction of CSDA for the 2021 - 2023 term.

The leadership of CSDA is elected from its six geographical networks. Each of the six networks has three seats on the board with staggered 3-year terms. Candidates must be affiliated with an independent special district that is a CSDA Regular Member in good standing and located within the geographic network they seek to represent (see the CSDA network map).

The CSDA Board of Directors is the governing body responsible for all policy decisions related to CSDA's member services, legislative advocacy, education and resources. The CSDA Board of Directors is crucial to the operation of the association and to the representation of the common interests of all California's special districts before the Legislature and the State Administration. Serving on the board requires one's interest in the issues confronting special districts statewide.

Commitment and Expectations:

- Attend all board meetings, usually 4-5 meetings annually, at the CSDA office in Sacramento.
- Participate on at least one committee, meets 3-5 times a year at the CSDA office in Sacramento. (*CSDA reimburses directors for their related expenses for board and committee meetings as outlined in board policy.)*
- Attend, at minimum, the following CSDA annual events: Special Districts Legislative Days - held in the spring, and the CSDA Annual Conference - held in the summer/fall. *(CSDA does **not** reimburse travel related expenses for the two conferences even if a board or committee meeting is held in conjunction with the event; however, does comp registration for the two events.)*
- Complete all four modules of CSDA's Special District Leadership Academy within 2 years of being elected. *(CSDA does **not** reimburse expenses for the academy classes even if a board or committee meeting is held in conjunction with the event.)*
- Complete Annual Chief Executive Officer Evaluation.

Please review the CSDA Board Policy 2.16 Board Commitments & Responsibilities.

Nomination Procedures:

Any Regular Member in good standing is eligible to nominate one person, a board member or managerial employee (as defined by that district's board of directors) for election to the CSDA Board of Directors. **A copy of the member district's resolution or minute action along with the Candidate Information Sheet must accompany the Nomination Form. The deadline for receiving nomination applications is March 26, 2020. Nominations and supporting documentation may be mailed or emailed.**
Mail: 1112 I Street, Suite 200, Sacramento, CA 95814
Email: amberp@csda.net

Once received, nominees will receive a candidate's letter in the mail. The letter will serve as confirmation that CSDA has received the nomination and will also include campaign guidelines.
Again This Year!
CSDA will be using a web-based online voting system, allowing your district to cast your vote easily and securely. **Electronic Ballots will be emailed to the main contact in your district May 25, 2020. All votes must be received through the system no later than 5:00 p.m. July 10, 2020.**

Districts can opt to cast a paper ballot instead; but you must contact Amber Phelen by e-mail at amberp@csda.net ***by March 26, 2020*** *in order to ensure that you will receive a paper ballot on time.*

CSDA will mail paper ballots on May 25, 2020 per district request only. ALL ballots must be received by CSDA no later than 5:00 p.m. July 10, 2020.

All selected CSDA Board Members will be introduced at the CSDA Annual Conference and Exhibitor Showcase in Palm Desert, CA in August 2020.

Expiring Terms
(See geographic network map for network breakdown)

Northern Network Seat C - Fred Ryness, Director, Burney Water District*
Sierra Network Seat C - Pete Kampa, GM, Saddle Creek Community Services District*
Bay Area Network Seat C - Stanley Caldwell, Director, Mt. View Sanitary District*
Central Network Seat C - Sandi Miller, GM, Selma Cemetery District
Coastal Network Seat C - Vincent Ferrante, Director, Moss Landing Harbor District*
Southern Network Seat C - Arlene Schafer, Director, Costa Mesa Sanitary District*

(* = Incumbent is running for re-election)

If you have any questions, please contact Amber Phelen at amberp@csda.net.

California Special Districts Association

DISTRICT NETWORKS

Upcoming Events in Your Area

Do you want to plan for upcoming workshops? Here are upcoming events that will take place throughout the northern network:

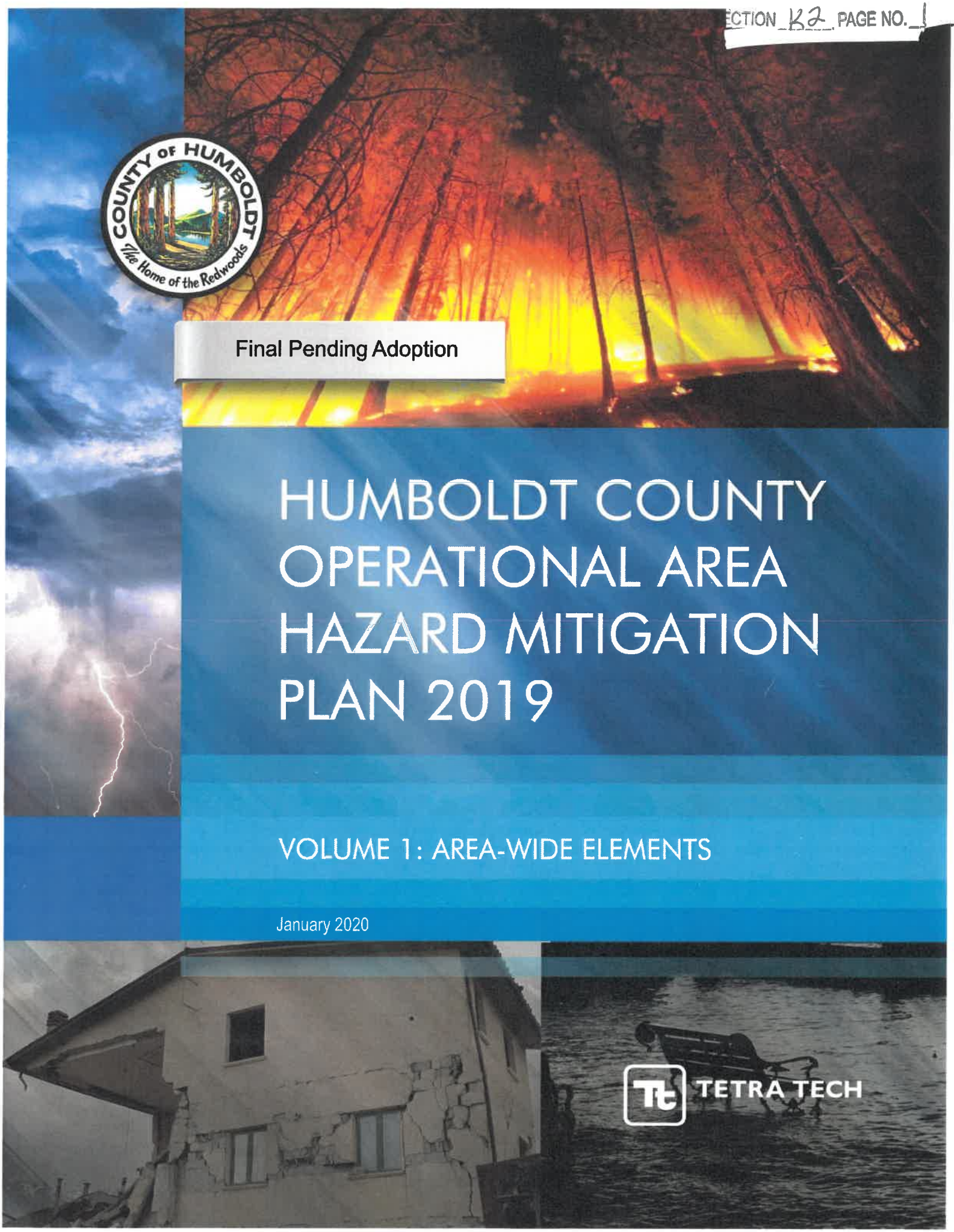
- Workshop: Understanding the Brown Act, May 28, McKinleyville, CA *(~~Free to SDRMA Member~~, $25 CSDA Member, and ~~$40 Non-member~~ – includes lunch!)*

- Workshop: CA Public Records Act Fundamentals, July 16, Anderson, CA *($25 CSDA/SDRMA Member, and $40 Non-member – includes lunch!)*

Need help paying for CSDA Professional Development?

The Special District Leadership Foundation (SDLF) provides scholarships for staff and elected officials from special districts with budgets of under $8 million. There is a rolling application deadline of the 15th of each month. Click here to find out more and to download an application.

California Special Districts Association
1112 I Street, Suite 200, Sacramento CA, 95814
877.924.2732 | www.csda.net



Final Pending Adoption

HUMBOLDT COUNTY OPERATIONAL AREA HAZARD MITIGATION PLAN 2019

VOLUME 1: AREA-WIDE ELEMENTS

January 2020

TETRA TECH

John Friedenbach

From: USRP@DWR <usrpinfo@WATER.CA.GOV>
Sent: Wednesday, January 29, 2020 4:24 PM
To: DWR_USRP@LISTSERVICE.CNRA.CA.GOV
Subject: Urban Stream Restoration Program Draft Recommended Awards List
Attachments: USRP 2019- Draft Recommended Awards List .pdf

Title: Urban Stream Restoration Program Draft Recommended Awards List

Draft Awards List Published and 15 Day Public Comment Period Begins

Published: January 29, 2020

Dear Interested Parties,

The Department of Water Resources (DWR) is pleased to release the Draft Recommended Awards List as outlined (attached) for the Urban Streams Restoration Program's 2019 Solicitation. These funding recommendations are subject to a public review period of 15 calendar days beginning on January 29, 2020, and ending on February 13, 2020. **Public Comments on the Draft Recommended Awards List must be submitted to RSP@water.ca.gov no later than Thursday, February 13, 2020, by 11:59 PM.**

The solicitation period closed on August 30, 2019. For more information about the solicitation rules, procedures, and process, please refer to the Guidelines and Proposal Solicitation Package (PSP) on the Riverine Stewardship Program – Grants webpage: https://water.ca.gov/Programs/Integrated-Regional-Water-Management/Riverine-Stewardship-Program/Riverine-Stewardship-Grants.

Potential applicants and interested parties are receiving this email. Future notices will include new solicitations, document releases, upcoming workshops, and other Riverine Stewardship Program announcements. Update your preferences for subscribing or unsubscribing to our email mailing list on the ListServ page. For additional DWR funding opportunities, visit https://water.ca.gov/Work-With-Us/Grants-And-Loans...

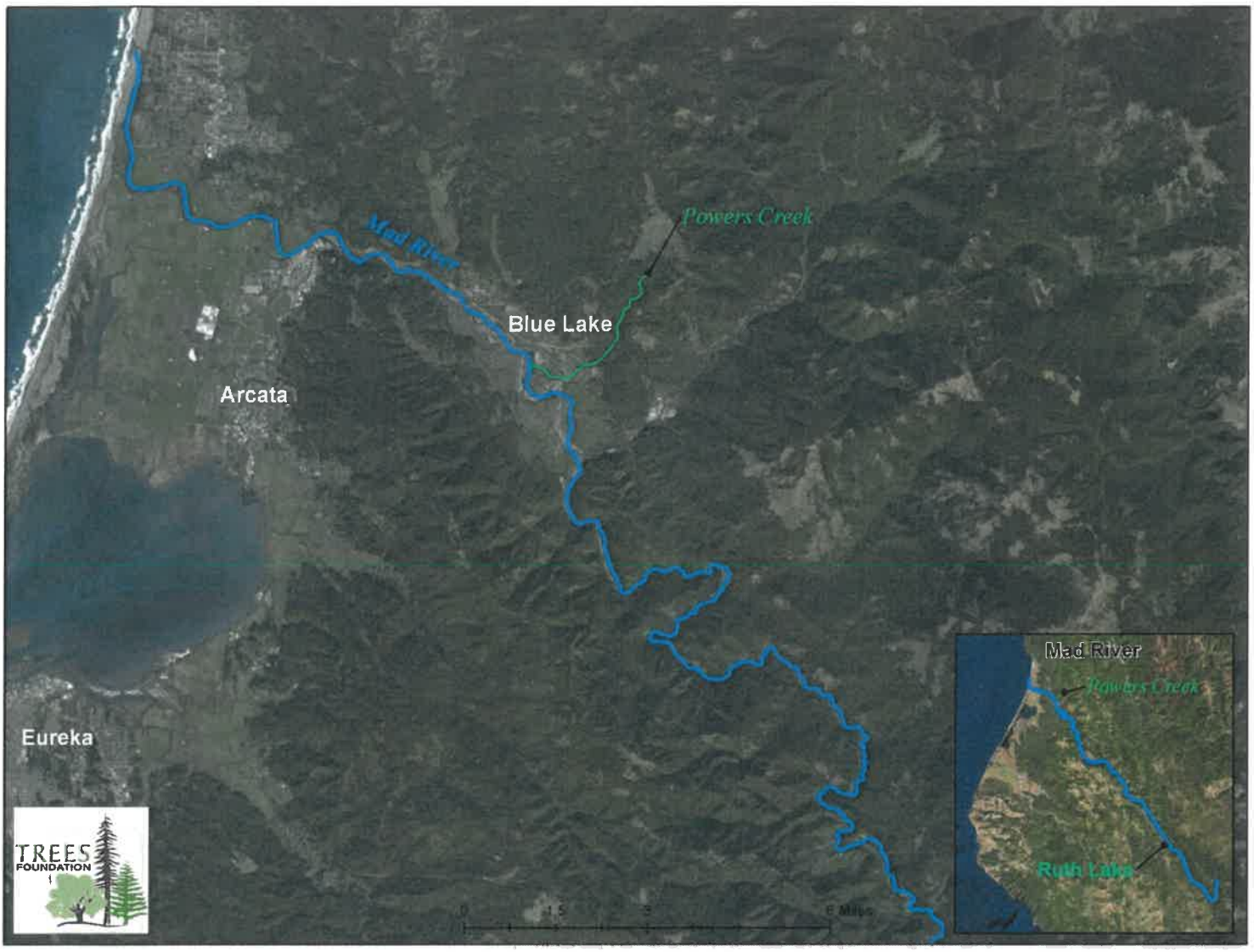
If you have any questions, please contact us at RSP@water.ca.gov.

Department of Water Resources
Riverine Stewardship Program
901 P Street; Room 411-A
P.O. Box 942836
Sacramento, CA 94236-0001

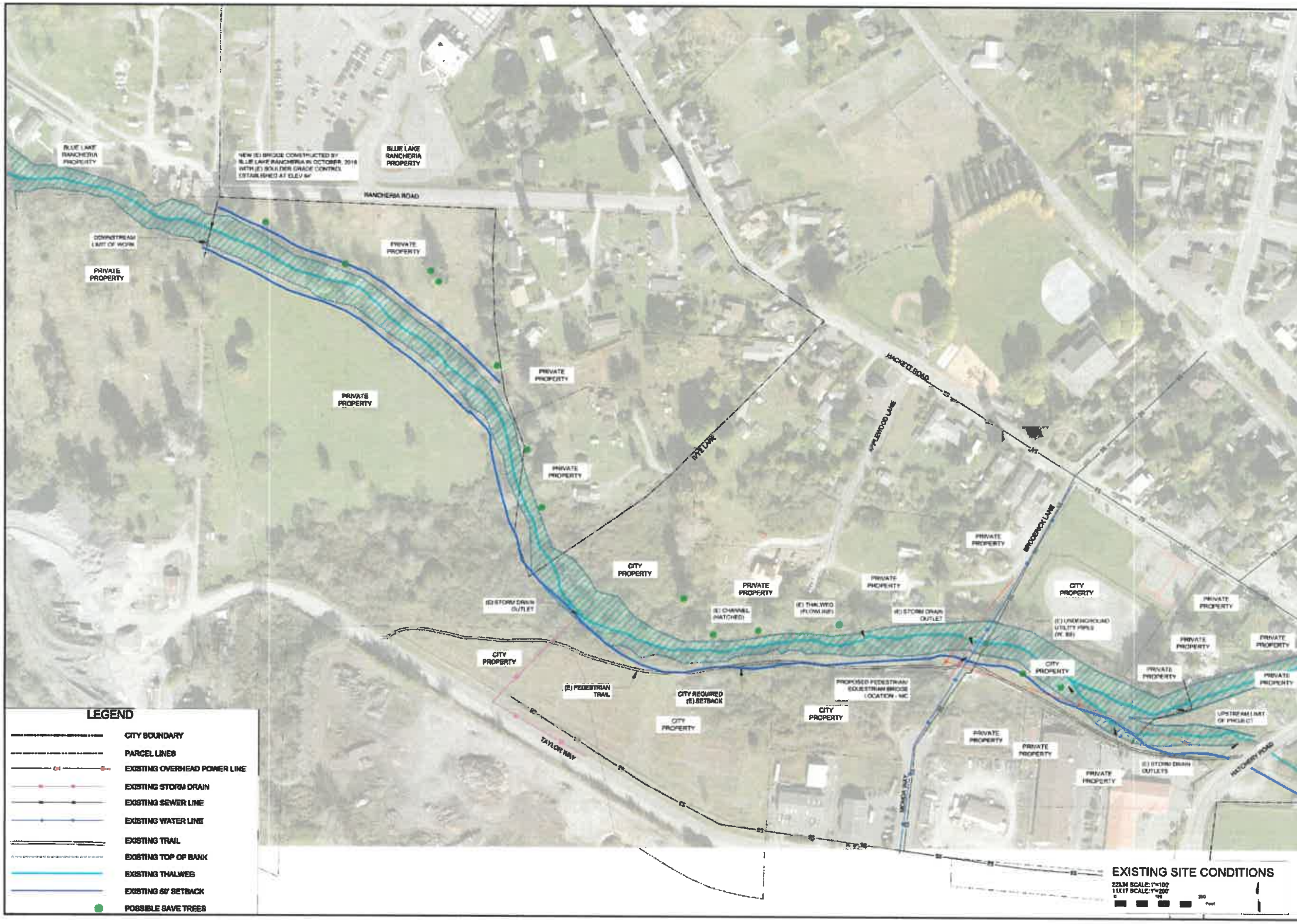
Urban Streams Restoration Program
2019 Solicitation

Project Name	Grantee (Sponsor/Cosponsor)	Recommended Amount Awarded	Project Location
Church Street Extension / Trout Creek Restoration	Town of Truckee/ Truckee River Watershed Council	$1,000,000.00	Truckee
Powers Creek Restoration Project	Mad River Alliance/ City of Blue Lake	$639,278.00	Humboldt
Town Creek Restoration and Education Project	Eel River Recovery Project/ Round Valley County Water District	$293,325.00	Mendocino
Buena Vista Creek Restoration and DAC Stewardship Planning Project	City of Oceanside/ Buena Vista Audubon Society	$275,800.00	San Diego
San Ysidro Debris Basin Improvement Project	Santa Barbara Co. Flood Control & Water Conservation District/ South Coast Habitat Restoration	$351,417.00	Santa Barbara
Wildcat Creek Fish Passage and Community Engagement*	Contra Costa Co. Flood Control and Water Conservation District/ Trout Unlimited	$523,385.00	Contra Costa
Courtland Creek Restoration Project in Courtland Creek Park	City of Oakland/ Oakland Parks and Recreation Foundation	$1,000,000.00	Alameda
Tally Ho Stream Restoration	Coastal San Luis Resource Conservation District/ Creeklands Conservation	$250,335.85	San Luis Obispo
Broadway Creek Restoration Project*	City of El Cajon/ The San Diego River Park Foundation	$1,000,000.00	San Diego
Morrison Creek Revitalization Project	City of Sacramento/ Sacramento Community Land Trust	$697,000.00	Sacramento
Belmont Creek Stream Restoration at Twins Pines Park	San Mateo Co. Department of Public works/ Belmont Park Boosters	$1,000,000.00	San Mateo

* Provisional approval



Produced 2017 by Trees Foundation GIS, Data Sources: Humboldt County GIS, CDF and USFS, ESRI



LICENSE STAMP

greenway
Solving community challenges

GREENWAY PARTNERS
1385 8TH STREET, SUITE 201 ARCATA, CA 95521
(707) 822-0597

EXISTING SITE CONDITIONS

POWERS CREEK FISH HABITAT RESTORATION PROJECT
POWERS CREEK
BLUE LAKE, CA 95525
CALIF. DEPT. OF FISH AND WILDLIFE

DRAWING NUMBER
C-1

Google Maps Powers Creek

SECTION 13, PAGE NO. 5

ACWA

ACWA
Association of California Water Agencies

ACWA 2020 Spring Conference & Exhibition
PRELIMINARY AGENDA
May 5-8, 2020 • Monterey, CA

ACWA JPIA - MONDAY, MAY 4

8:30 - 10:00 AM
- ACWA JPIA Program Committee

10:15 - 11:15 AM
- ACWA JPIA Executive Committee

1:30 - 4:00 PM
- ACWA JPIA Board of Directors

4:00 - 5:00 PM
- ACWA JPIA Town Hall

5:00 - 6:00 PM
- ACWA JPIA Reception

TUESDAY, MAY 5

8:00 AM - 9:45 AM
- Agriculture Committee

8:00 AM - 6:00 PM
- Registration

8:30 AM - Noon
- ACWA JPIA Seminars

9:00 AM - 4:00 PM
- ACWA Legal Briefing & CLE Workshop

10:00 - 11:45 AM
- Groundwater Committee
- Local Government Committee

11:00 AM - Noon
- Outreach Task Force

Noon - 2:00 PM
- ACWA 101 & Luncheon
- Committee Lunch Break

1:00 - 2:45 PM
- Energy Committee
- Finance Committee
- Scholarship & Awards Subcommittee
- Water Management Committee

1:30 - 3:30 PM
- ACWA JPIA: Sexual Harassment Prevention for Board Members & Managers (AB 1825)

3:00 - 4:45 PM
- Communications Committee
- Federal Affairs Committee
- Membership Committee
- Water Quality Committee

5:00 - 6:30 PM
- Welcome Reception in the Exhibit Hall

WEDNESDAY, MAY 6

7:30 AM - 5 PM
- Registration

8:00 - 9:45 AM
- Opening Breakfast *(Ticket Required)*

WEDNESDAY, MAY 6 *(continued)*

7:30 AM - Noon & 1:30 - 6:00 PM
- Exhibit Hall

7:30 - 8:30 AM
- Coffee Service in the Exhibit Hall

10:00 - 11:30 AM
- Attorneys Program
- Energy Committee Program
- Exhibitor Demos
- Finance Program
- Region Issue Forum
- Statewide Issue Forum
- Technology Program
- Water Industry Trends Program

11:30 - NOON
- Networking in the Exhibit Hall

NOON - 1:45 PM
- General Session Luncheon *(Ticket Required)*

2:00 - 3:15 PM
- Attorney Program
- Communications Committee Program
- Energy Committee Program
- Exhibitor Case Study
- Region Program
- Statewide Issue Forum
- Water Industry Trends Program

3:30 - 4:45 PM
- Exhibitor Case Study
- Finance Program
- Local Government Committee
- Statewide Issue Forums
- Technology Program
- Water Industry Trends Program

3:30 - 5:30 PM
- Legal Affairs Committee

5:00 - 6:00 PM
- Prize Drawing Fiesta Night in the Exhibit Hall

5:30 - 7:00 PM
- CalDesal Hosted Mixer
- Jacobs Hosted Reception

THURSDAY, MAY 7

7:30 AM - 4:00 PM
- Registration

7:45 - 9:15 AM
- Regions 6-10 Membership Meetings

8:00 AM - Noon
- Exhibit Hall

8:00 - 9:15 AM
- Networking Continental Breakfast, Exhibit Hall *(Ticket Required)*

THURSDAY, MAY 7 *(continued)*

8:30 - 10:45 AM
- Ethics Training (AB 1234) - *Limited Seating*

9:30 - 11:00 AM
- Attorneys Program
- Exhibitor Demos
- Finance Program
- Human Resource Program
- Region Issue Forum
- Statewide Issue Forum
- Water Industry Trends Program

11:00 - 11:45 AM
- Prize Drawings in the Exhibit Hall

NOON - 1:45 PM
- General Session Luncheon *(Ticket Required)*

2:00 - 3:15 PM
- Attorneys Program
- Exhibitor Case Studies
- Federal Issues Forum
- Human Resource Program
- Statewide Issue Forum
- Water Industry Trends Program

3:30 - 5:00 PM
- Regions 1-5 Membership Meetings

6:00 - 7:00 PM
- Gen Jam Reception

7:00 - 10:00 PM
- Dinner & Entertainment *(Ticket Required)*

FRIDAY, MAY 8

8:00 - 9:30 AM
- Registration

8:30 - 10:00 AM
- ACWA's Hans Doe Past Presidents' Breakfast in Partnership with ACWA JPIA *(Ticket Required)*

OTHER EVENTS

THURSDAY, MAY 7

6:45 - 8:30 AM
- San Joaquin Valley Agricultural Water Committee

All conference programs are subject to change.

Last modified: January 24, 2020

Committee Chair and Vice Chair Positions Announced

ACWA President Steve LaMar recently announced the 2020-'21 committee appointments with the Board of Directors ratifying the committee chair and vice chair positions.

Committee appointments are made by the president upon recommendations from the region chairs and vice chairs, taking into consideration regional composition and other guidelines. To view the 2020-'21 committee rosters, please visit www.acwa.com.

There are 13 standing committees. They are structured to include member representation from all 10 ACWA Regions, bringing together diverse voices on technical and policy matters. Some committees have a limited size while others are unlimited.

Committee members are appointed for two-year terms that begin on Jan. 1 of even-numbered years.

Questions about the committee appointment process can be directed to Region and Member Engagement Specialist Ana Javaid at anaj@acwa.com or (916) 441-4545.

Committee	Chair	Vice Chair
Agriculture	**Bill Diedrich**, San Luis Water District	**Alexandra Biering**, Friant Water Authority
Business Development	**Larry McKenney**, Municipal Water District of Orange County	**Stacy Taylor**, Mesa Water District
Communications	**Sue Stephenson**, Dublin San Ramon Services District	**Ashley Metzger**, Desert Water Agency
Energy	**Charley Wilson**, Santa Margarita Water District	**Michael Minkler**, Calaveras County Water Agency
Federal Affairs	**Patrick O'Dowd**, Coachella Valley Water District	**Jim Peifer**, Sacramento Suburban Water District
Finance	**Cheryl Clary**, Irvine Ranch Water District	**Bruce Rupp**, Humboldt Bay Municipal Water District
Groundwater	**John Woodling**, Sacramento Suburban Water District	**Mike Markus**, Orange County Water District
Legal Affairs	**Jennifer Buckman**, Yuba Water Agency	**Claire Collins**, Irvine Ranch Water District
Local Government	**Terri Daly**, Yuba Water Agency	**Mildford Harrison**, San Bernardino Valley Water Conservation District
Membership	**George Murdoch**, East Orange County Water District	**Herb Smart**, Turlock Irrigation District
State Legislative	**Brian Poulsen**, El Dorado Irrigation District	**Lauren Layne**, Fresno Metropolitan Flood Control District
Water Management	**David Pedersen**, Las Virgenes Water District	**Ted Trimble**, Western Canal Water District
Water Quality	**Edgar Dymally**, Metropolitan Water District of Southern California	**Sarah Palmer**, Zone 7 Water District

SNOW SURVEY Continued from page 1

a dry start to this water year followed by cold, wet December storms that brought the state up to 74% of average annual precipitation for this time of year. Climate change is expected to lead to continued warming and fewer but more intense storms impacting the snowpack of the Sierra Nevada. These changes continue to affect the distribution of snow across elevations, its pattern of accumulation and rate of melt.

DWR conducts five media-oriented snow surveys at Phillips Station each winter in January, February, March, April and, if necessary, May. On average, the snowpack supplies about 30% of California's water needs as it melts in the spring and early summer.

ACWA
Association of California Water Agencies

Bringing Water Together

Sent via email: commentletters@waterboards.ca.gov

January 28, 2020

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Subject: Comment Letter – Proposed Urban Water Conservation Reporting Regulations

Dear Ms. Townsend:

The Association of California Water Agencies (ACWA) appreciates the opportunity to comment on this regulatory action to require permanent monthly water production reporting by urban water suppliers, as contained in the Initial Statement of Reasons (ISOR) for the proposed Division 3, Chapter 3.5, Article 2 of Title 23 of the California Code of Regulations (hereafter "monthly reporting rule" or "rule").

ACWA represents approximately 440 public water agencies responsible for delivery of over 90% of the water used for residential, commercial and agricultural purposes in California. For over a year ACWA and a coalition of water supplier representatives have worked with State Board staff to offer suggestions as this proposal was developed. We appreciate that the current proposal reflects much of this input, which we intended to help better integrate this reporting process with the State Water Board's Electronic Annual Report (eAR) process and reporting associated with implementing the Water Conservation and Drought Planning Act of 2018 (also known as "AB 1668 and SB 606"). While this proposal has been significantly revised to address some of these issues, water agencies continue to have concerns with an on-going reporting requirement that we believe is not reflective of the water use efficiency target-setting and reporting requirements of the new legislation.

Authority and Purpose

ACWA appreciates that the State Water Board revised the previously issued ISOR to delete references to its authority under Water Code Section 275 (regarding the prevention of waste and unreasonable use of water) as a basis of its authority to issue this rule. This is welcome, because any implication that reporting monthly water production as specified under this rule could be used by the State Water Board to make a determination concerning wasteful and unreasonable water use is not congruent with the provisions of AB 1668 and SB 606. However, just striking references to WC Section 275 is insufficient in our view; the proposal should be revised to eliminate all references to eliminating "waste and unreasonable use of water" as a purpose that would be advanced by this rule. Although this proposed rule requires reporting monthly water production, nowhere does the ISOR explain how reporting itself will lead to any of the protections the ISOR identifies as benefits of and justification for the rule (such as safeguarding urban water supplies, improving the protection of the public's health and welfare, extending water supplies, and benefitting California residents and worker safety).

Residential Gallons Per Capita Per Day

The proposal requires monthly water production reporting in order to allow the State Water Board to continue to calculate and publically post the "Residential Gallons Per Capita Per Day" (R-GPCD) for each urban water supplier on a monthly basis. Although this R-GPCD metric has been used by the State Water Board as a general indication of changes in water use during the drought of 2015-16 and since, it is reported in comparison to a somewhat arbitrary 2013 baseline (which is different for each urban water supplier). Additionally, R-GPCD does not take into consideration urban water supplier-specific rainfall, temperature, humidity, groundwater levels, snowpack, legislation, litigation, and other unique conditions water systems experience, as well as surface storage, groundwater storage, emergency storage, supplemental supply, and the myriad other plans and programs water systems have in place to ensure supply can meet demand. In fact, the State Water Board website contains the following disclaimer regarding use of R-GPCD entitled "Factors that can affect per capita water use", which was prepared in 2015, and states as follows:

> *"It is not appropriate to use Residential Gallons Per Capita Day (R-GPCD) water use data for comparisons across water suppliers, unless all relevant factors are accounted for. Factors that can affect per capita water include:*
>
> *• Rainfall, temperature and evaporation rates – Precipitation and temperature varies widely across the state. Areas with high temperature and low rainfall need to use more water to maintain outdoor landscaping. Even within the same hydrologic region or the same water supply district these factors can vary considerably, having a significant effect on the amount of water needed to maintain landscapes.*
> *• Population growth – As communities grow, new residential dwellings are constructed with more efficient plumbing fixtures, which causes interior water use to decline per person as compared to water use in older communities. Population growth also increases overall demand.*
> *• Population density – highly urbanized areas with high population densities use less water per person than do more rural or suburban areas since high density dwellings tend to have shared outdoor spaces and there is less landscaped area per person that needs to be irrigated.*
> *• Socio-economic measures such as lot size and income – Areas with higher incomes generally use more water than areas with low incomes. Larger landscaped residential lots that require more water are often associated with more affluent communities. Additionally, higher income households may be less sensitive to the cost of water, since it represents a smaller portion of household income.*
> *• Water prices – Water prices can influence demand by providing a monetary incentive for customers to conserve water. Rate structures have been established in many districts to incentivize water conservation, but the effectiveness of these rate structures to deter excessive use and customers sensitivity to water prices vary."*

Another broader policy concern associated with continued use of R-GPCD is related to the difference between "conservation" and "efficiency." These two words are often used interchangeably, in common parlance as well as in statute, and the ISOR is full of references to "conservation" and claims that the rule will support and increase water conservation. However, these two words retain significant difference as applied by urban water suppliers. "Efficiency" is a concept that suppliers strive and advocate for; "conservation" is a tool that should be reserved for emergencies. Reducing average water use to the level most agencies consider "conservation" amounts to a hardening of demand that ultimately limits everyone's options when it comes to emergency conditions.

Urban water suppliers across the state have invested significant resources over many decades to ensure self-reliance during periods of drought, and it is imperative we develop a framework that accounts for those ratepayer-funded investments. Supply is the primary metric for urban water suppliers and their ratepayers; a metric designed during the drought as a near-term monitor of consumption under conditions that affected the entire state is not appropriate to measure long-term efficiency and supply reliability.

Given that R-GPCD is not an adequate metric to use in determining water use efficiency, and it is not aligned with the water use efficiency target-setting process under AB 1668 and SB 606 process, we request that it now be discontinued by the State Water Board. If R-GPCD is retained as a water use reporting metric, we request that the above disclaimer language be included as a footnote in any publicly-accessible reporting of R-GPCD values for urban water suppliers.

Sunset the Rule with SB 606/AB 1668 Implementation

The ISOR references two of Governor Brown's Executive Orders, B-37-16 and B-40-17, as justification for permanent monthly reporting, suggesting that this proposed rule "should act as a bridge until permanent requirements are in place." However, the drought-related emergency that was the context for this monthly reporting rule ended in 2017 and the 2018 Water Conservation and Drought Planning Act has essentially precluded the need for this monthly reporting. Although The Evaluation of Inconsistency in the Notice of Proposed Rulemaking states that the rule "may be adjusted to complement" the Act, we request that more specific and binding language to sunset this rule at the earliest date be added.

Data Integrity

Another limitation of monthly reporting is its immediacy: an aspect the ISOR claims as a benefit but which urban water agencies consider a liability. The realities of billing thousands of customers—or tens of thousands or hundreds of thousands—ensure that discrepancies occur. Many agencies bill on a bimonthly basis, meaning that monthly reports require estimating and/or prorating demand. Additionally, over the course of a year the process of accounting for missed payments, shutoffs, stuck meters, zero reads, AMI discrepancies, and other supply or demand can amount to as much as a 15-percent disparity compared with the results of monthly reports.

The State and water suppliers share the common goal of providing high-quality data that has been reviewed and validated. Although the Electronic Annual Report is a good example of a

process in which agencies can provide water supply information that they have had time to collect, organize, and verify, even this reporting mechanism does not work well for urban water suppliers that report on a fiscal year basis since the eAR is due in April and finalized data for the time period asked for on the eAR is not available at that time. For many water suppliers the requirement to submit water production data on a monthly basis forces submittal of incorrect and/or incomplete data that will not serve the State's goal of presenting accurate and useful information.

ACWA requests that the State Water Board include within any adoption resolution a clear indication that this monthly provisional data is not intended to develop policy, declare emergencies, or administer water use regulations.

Enforcement Protocol and Provision for Delayed Reporting

With regard to the proposal for imposition of immediate fines for failure to submit monthly reports, we find the purpose and need for such fines to be entirely unconvincing considering the absence of any clear public policy need for this data. Under the previous monthly reporting process, the State Water Board administered its enforcement authorities in a progression of informational orders, conservation orders, and/or civil liability. From both a fairness and transparency standpoint, ACWA requests that the State Water Board develop and publish a policy and protocol relating to enforcement of this monthly reporting rule which implements the progressive enforcement policy, contains a grace period for delayed submittals upon a showing of good cause by water suppliers (such as natural disasters and other extraordinary circumstances), and proposes a more judicious use of fines when necessary.

Thank you for considering these comments. If you have questions, please contact me directly at (916) 669-2382.

Sincerely,

David E. Bolland

David Bolland
Director of State Regulatory Relations

cc:
Honorable Chair, E. Joaquin Esquivel, Chair, State Water Resources Control Board
Honorable Dorene D'Adamo, Vice Chair, State Water Resources Control Board
Honorable Tam M. Doduc, Member, State Water Resources Control Board
Honorable Sean Maguire, Member, State Water Resources Control Board
Honorable Laurel Firestone, Member, State Water Resources Control Board
Ms. Eileen Sobeck, Executive Director, State Water Resources Control Board
Mr. Michael Lauffer, Chief Counsel, State Water Resources Control Board
Mr. Eric Oppenheimer, Chief Deputy Director, State Water Resources Control Board
Mr. James Nachbaur, Director of the Office of Research, Planning and Performance
Mr. Max Gomberg, Climate and Conservation Program Manager, Office of Research, Planning and Performance

Ms. Paola Gonzalez, Climate and Conservation Specialist, Office of Research, Planning and Performance
Ms. Charlotte Ely, Climate and Conservation Specialist Office of Research, Planning and Performance
Mr. Dave Eggerton, Executive Director, ACWA
Ms. Cindy Tuck, Deputy Executive Director, Government Relations, ACWA

Sherrie Sobol

From: Linda Craun <lcraun@acwajpia.com> on behalf of JPIA Training <training@acwajpia.com>
Sent: Thursday, January 16, 2020 11:35 AM
To: Sarah Crawford; Patricia Slaven
Cc: Suzanne Wallace
Subject: ACWA JPIA Live Webinars for Dealing With a Difficult Board Member and More!

Learn Online with JPIA Live Webinars

Board Topics

Sexual Harassment Prevention - January 28, 2020
Dealing with a Difficult Board Member - January 21, 2020
Board Boot Camp: Being a Better Board Member - March 17, 2020
Chair a Meeting with Confidence - June 10, 2020

Staff Topics

Sexual Harassment Prevention—Staff - January 23, 2020
Sexual Harassment Prevention—Managers - January 28, 2020
New Laws for 2020 - January 7 & 16, 2020

For more information, email training@acwajpia.com; or call 800.231.JPIA
To register, click here

RREDC/RCEA

Redwood Coast Energy Authority
633 3rd Street, Eureka, CA 95501
Phone: (707) 269-1700 Toll-Free (800) 931-7232 Fax: (707) 269-1777
E-mail: info@redwoodenergy.org Web: www.redwoodenergy.org

BOARD OF DIRECTORS MEETING DRAFT MINUTES

Humboldt Bay Municipal Water District Office
828 7th Street, Eureka, CA 95501

December 19, 2019
Thursday, 3:30 p.m.

Chair Michael Winkler called a regular meeting of the Board of Directors of the Redwood Coast Energy Authority to order on the above date at 3:34 p.m. Notice of this meeting was posted on December 15, 2019. PRESENT: Vice Chair Austin Allison, Chris Curran, Estelle Fennell (arrived 3:36 p.m., departed 5:02 p.m.), Dwight Miller, Robin Smith, Frank Wilson, Chair Michael Winkler, Sheri Woo. ABSENT: Dean Glaser. STAFF AND CONSULTANTS PRESENT: Business Planning and Finance Director Lori Biondini, RCEA General Counsel Nancy Diamond, Power Resources Director Richard Engel, Executive Director Matthew Marshall, Clerk of the Board Lori Taketa.

REORDERING AGENDA ITEMS

Chair Winkler requested that agenda item 11.1 be addressed after the consent calendar. Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Allison, Woo: Address agenda item 11.1 Carbon Free/Renewable Power Purchase Target Review/2020 Power Procurement after voting on the consent calendar.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Absent: Glaser.

REPORTS FROM MEMBER ENTITIES

Director Chris Curran reported that he is now the Blue Lake City Council's primary RCEA representative. Summer Daugherty is the city's alternate representative.

Director Woo reported that Ruth Lake was at 66% capacity earlier in the week, which is low for this time of year.

Director Allison reported that Eureka is working on updating its building standards code to reduce natural gas heater use in new buildings and transition towards more electrification. The propane industry is lobbying Director Allison, representing propane as a clean energy source.

Director Fennell arrived at 3:36 p.m.

The directors began discussing the Humboldt County Board of Supervisors' decision to reject the Humboldt Wind Project until General Counsel Diamond recommended the Board vote to take up agenda item 6.1 to allow for more complete discussion and public comment.

REORDERING AGENDA ITEMS

M/S: Allison, Wilson: Address agenda item 6.1 Renewable Energy Power Purchase Agreement with Humboldt Wind, LLC.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Absent: Glaser.

6.1 Renewable Energy Power Purchase Agreement with Humboldt Wind, LLC

The directors expressed disappointment about the project's failure, an urgent need to come to agreement on and to commit to local renewable energy projects to address the climate crisis, and the need to begin engaging impacted communities early in project development.

Director Fennell described the difficulties caused by Terra-Gen's short timeline to obtain project approval to qualify for a sunsetting federal subsidy. She stated that many Humboldt Wind Project opponents offered her commitments of support for the upcoming offshore wind project and for finding supportable climate change solutions.

The directors discussed these potential actions:

- Streamline the solar energy project permitting process
- Streamline the environmental review process without cutting corners
- Conduct a community discussion on climate actions Humboldt County can take
- Focus on transportation and heating electrification to address fossil fuel consumption
- Consider thorium reactors to complement variable renewable energy output
- Work closely and formally with the County on local renewable energy projects

The directors expressed concern about:

- Public perception of RCEA supporting projects prior to approval
- Understanding clearly the location of Native American sacred sites
- How Humboldt County's anti-development reputation hurts the community's future and energy independence
- A strong community focus on solar as Humboldt County's primary renewable energy solution despite seasonality, battery storage's high expense, and the likely expense for private citizens

Chair Winkler invited public comment:

Blue Lake resident Scott Fraser asked RCEA to be open-minded about climate change solutions and to consider supporting solar energy, adding that the community will not want to talk with the agency about new initiatives until RCEA has considered all possible solutions.

Member of the public Dr. Ken Miller stated that solar generators are an inexpensive alternative to gas-powered generators, and that the public would like RCEA to be a solar energy production leader, send staff to solar conferences and promote low-impact renewable energy solutions. Dr. Miller stated that dismissing solar energy hurts RCEA's credibility.

Deborah Dukes of 350 Humboldt stated that she would have accepted the Supervisors' decision if it were based on reasoned dialog. Ms. Dukes stated that her testimony in support

of the Humboldt Wind Project was met with insults and intimidation and that she disagreed with the way the meetings were conducted.

Ferndale resident Ellin Beltz stated that conservation must be foremost in action, especially in public buildings, and that by lowering the 50% national rate of energy waste the overall electricity load can be reduced.

Arcata resident Angelina Lasko suggested that RCEA focus on storage and follow Southern California Edison's example of finding 220 MW of storage within their grid. Ms. Lasko suggested that the County own renewable power infrastructure and become a microgrid.

Hoopa Valley Tribe and RCEA staff member Lori Biondini stated that most people do not understand the severity of the historical and current trauma, marginalization and alienation experienced by native communities. Ms. Biondini stated that she looked forward to participating in more projects employing early and frequent communication.

Chair Winkler closed public comment.

Executive Director Marshall stated that of the concerns raised about the Humboldt Wind Project, staff felt the Wiyot Tribe's concerns were the most challenging to address or mitigate. He stated that RCEA would continue to include the community in decision-making and to engage in early and frequent project discussions with impacted groups. The CPUC requires RCEA to provide a large percentage of the County's electricity through long term contracts, Mr. Marshall continued, and without the Terra-Gen project, RCEA's Kern County solar project contract may require revision, or contracts with companies that responded to the earlier renewable request for proposals may need reconsideration.

Executive Director Marshall reminded the directors that more than half of RCEA's staff work focuses on energy efficiency, that staff is working with businesses and public agencies on energy storage, that RCEA launched a feed-in tariff program to develop community-scale solar projects, and that with the current airport microgrid project the agency will own and operate Humboldt County's largest solar array and battery system and may have more storage as a percentage of customer load than any other California load-serving entity, once this project is completed.

The directors discussed:

- How RCEA is well-positioned to bring together community members willing to discuss the county's energy sources and foster a respectful discussion of all options so a common base of facts and agreement on action can be reached.
- How commitments need to be gathered from people for the RePower strategic plan's ambitious goals.
- How despite efforts by the county to instill respectful dialog, it was not possible to control the actions of people who were passionate about the issue.
- How every County Supervisor must redouble efforts to develop sustainable energy and how every citizen must learn as much as possible about the climate emergency
- How making exceptions of too many proposed renewable energy projects prevents meaningful climate action.

ORAL COMMUNICATIONS

Chair Winkler invited public comment. Member of the public Dr. Ken Miller stated that Humboldt County helped start the solar revolution in the 1970s as a leading solar panel adopter and has an opportunity to continue to be a model solar energy implementer. Chair Winkler closed public comment.

CONSENT CALENDAR

3.1 Approve Minutes of November 21, 2019, Board Meeting.
3.2 Approve Disbursements Report.
3.3 Accept Financial Reports.
3.4 Reappoint Jerome Carman, Colin Fiske, Larry Goldberg, Pam Halstead, Tom Hofweber and Dennis Leonardi to the Community Advisory Committee for Terms Expiring April 12, 2022.
3.5 Approve Changes to Feed-In Tariff Power Purchase Agreement as Amended to Address Local Developer Incentive and Energy Curtailment Calculation Concerns.
3.6 Consent to Assignment of the Existing Biomass Power Purchase Agreement from DG Fairhaven Power, LLC to DG Fairhaven, LLC, and Authorize the Executive Director to Execute All Necessary Documents.

Director Woo stated she would abstain from voting on item 3.6 because of a remote conflict of interest. DG Fairhaven is a client of Director Woo's employer, SHN. Director Woo is a minority SHN shareholder, although the Board's decision will not affect SHN's shareholder price. Director Woo does not supervise any SHN employee working with DG Fairhaven.

Chair Winkler invited public comment. Dr. Ken Miller, member of the public requested item 3.4 be removed from the consent calendar. Chair Winkler closed public comment.

M/S: Allison, Miller: Approve consent calendar items 3.1, 3.2, 3.3, 3.5 and 3.6.

The motion passed with a voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Absent: Glaser. Abstain: Woo for item 3.6.

Chair Winkler invited public comment.

Dr. Miller stated that some Community Advisory Committee nominees were not open-minded regarding distributed energy production and recommended the Board change the committee's membership as the body presents community input to the Board.

A member of the public suggested the Board consider adding seats for tribal member representatives to the CAC.

Member of the public Angelina Lasko stated that she was not aware of the committee and that the community needs more access to the Committee and Board.

Chair Winkler closed public comment.

The Board discussed the current Rio Dell and Fortuna committee member vacancies, Rio Dell community members' awareness of the importance of proactive involvement, how tribal

members are welcome to apply for committee seats, the challenges of achieving equitable representation of the many tribal governments in the county and of finding engaged committee member-volunteers, notification challenges given the dispersed way in which the community gathers information, how all board members are accessible via email, and the possibility of setting preferences for different at-large committee seats.

M/S: Fennell, Miller: Approve consent calendar item 3.4.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Absent: Glaser.

COMMUNITY CHOICE ENERGY (CCE) BUSINESS - Chair Winkler confirmed that a CCE quorum was present.

NEW CCE BUSINESS

Carbon Free/Renewable Power Purchase Target Review/2020 Power Procurement

Power Resources Director Engel presented a staff report on the carbon free energy procured for 2019 and some of 2020 and which staff is proposing to procure again for the rest of 2020 within set price parameters. Staff proposes redirecting funds to local investment should this power source be too expensive or unavailable although higher greenhouse gas emissions from the CCE program's power content may result. The Board's previous approval of this power source was based on the source's relatively low cost.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Allison, Fennell: Authorize staff to expend up to $1.5 million for procurement of carbon-free power for calendar year 2020, at a unit price not to exceed 160% of 2020 carbon-free power procured to date, redirecting any portion of these funds not committed by May 1, 2020 to an incentive program for energy storage at critical public facilities.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler. Absent: Glaser. Non-voting: Woo.

REORDERING AGENDA ITEMS

M/S: Allison, Fennell: Address agenda item 5.1 Approve Updated RePower Humboldt/Comprehensive Action Plan for Energy Planning Document Draft.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Absent: Glaser.

OLD BUSINESS

5.1 - Approve Updated RePower Humboldt/Comprehensive Action Plan for Energy Planning Document Draft

Executive Director Marshall described revisions in the final RePower Humboldt/ Comprehensive Action Plan for Energy document prompted by comments during recent Board and Community Advisory Committee meetings. The long-term planning document sets out goals for the next 10 years which the Board may review and update periodically. The directors discussed the challenge of balancing conflicting desires for shortened biomass contracts which hasten carbon emission reduction and for longer contracts which enable emission-reducing infrastructure investment. A request was made for a California Air Resources Board presentation on air quality impacts of biomass plants and wood burning stoves. There was further discussion about how biomass energy emits less than 2% of California's carbon emissions during the evening, how the remainder result from natural gas and coal, and how mentioning sequestration in the document enables work in that arena.

Director Fennell left at 5:02 p.m. Chair Winkler invited public comment.

Bob Marino of DG Fairhaven spoke of the need for long-term contracts to make equipment investments and expressed a willingness to serve on the biomass technical advisory committee.

Member of the public Martha Walden expressed support for a technical advisory committee to investigate mill waste burning impacts and how other communities balance grids without fossil fuel and biomass use. Ms. Walden expressed concern that energy independence emphasis leads to more biomass energy production and the primary importance of finding the most rapid way to draw down atmospheric greenhouse gases.

Member of the public Ellen Golla expressed her disappointment with the RePower document's emphasis on biomass energy use which she stated goes against RCEA's mission to advance the use of clean, renewable and efficient resources.

Arcata resident Walt Paniak stated that biomass remains an expensive, inefficient and unhealthy energy source and adding forest waste as fuel continues ratepayer subsidies. He stated the need to reward the growth and retention of as many big trees as possible.

Chair Winkler closed public comment.

M/S: Allison, Miller: Adopt the 2019 RePower Humboldt Comprehensive Action Plan for Energy.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Miller, Smith, Wilson, Winkler, Woo. Absent: Fennell, Glaser.

CLOSED SESSION

Chair Winkler invited public comment on the closed session items. No one came forward to speak. Chair Winkler closed public comment.

The directors adjourned to closed session at 5:10 p.m. to meet with legal counsel per Government Code Section 54956.9(d)(4), in re PG&E, Bankruptcy Court, 19-30088, Northern District of California, and regarding Public Employee Performance Evaluation, pursuant to Government Code Section 54957(b)(1): Executive Director.

The directors reconvened to open session at 5:57 p.m. Chair Winkler stated that there was nothing to report from closed session.

NEW BUSINESS

Fiscal Year 2019-2020 1st Quarter Budget Summary (Information only)

Executive Director Marshall presented the budget summary staff report, noting that because RCEA's CCE program mirrors PG&E's rates, average net revenues are higher when summer rates are in effect and dip when winter rates are implemented. The fluctuations are projected to balance out in the second half of the fiscal year.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

CCE Program Update (Information only)

California Public Utilities Commission Decision Requiring Electric System Reliability Procurement for 2021-2023

Executive Director Marshall reported that in anticipation of some natural gas plants being decommissioned, the CPUC identified gaps when energy production will be inadequate to meet growing demand, factoring solar energy production's nonalignment with peak energy use periods. The CPUC divided the shortfall into renewable energy shares from new sources that each California load-serving entity must procure. RCEA's airport solar microgrid will fulfill some of the agency's 2021 share, and the agency may need to do targeted procurement to fulfil requirements through 2023. The new energy sources may be located anywhere in California and the offshore wind project will not be online in time to meet the requirements.

Postponement of annual review and update of RCEA's Energy Risk Management Policy

Executive Director Marshall stated that the annual risk management policy review would take place during the following meeting.

END OF COMMUNITY CHOICE ENERGY (CCE) BUSINESS

Chair Winkler adjourned the meeting at 6:02 p.m.

RREDC
Redwood Region Economic Development Commission
Prosperity Center 520 E Street, Eureka, California 95501
Phone 707.445.9651 Fax 707.445.9652 www.rredc.com

REDWOOD REGION ECONOMIC DEVELOPMENT COMMISSION
Regular meeting of the Board of Directors
Prosperity Center, 520 E Street, Eureka, CA
January 27, 2020 at 6:30 pm
AGENDA

I. Call to Order & Flag Salute

II. Approval of Agenda and Minutes
- A. Approval of Agenda for January 27, 2020 meeting
- B. Approval of Minutes of the Board of Directors Meeting September 23, 2019

III. Public Input for non-agenda items

IV. Program – Randall Weaver, Labor Market Consultant, Labor Market Information Division Calfornia Employment Development Department –
Humboldt County Labor Force and Employment Trends

V. Consent Calendar
- A. Acceptance of Agency-wide Financial Reports: August 2019 through December 2019

VI. Reports – No Action Required
- A. Loan Portfolio Reports: July-September 2019; October 2019; November 2019; and December 2019
- B. Executive Director's Report

VII. Old Business
- A. Discussion of Proposed Updates to the By-Laws

VIII. New Business
- A. Amendment to FY 2020 Budget
- B. Adoption of 2020 Regular Meeting Schedule
- C. Election of Board Officers and Executive Committee Members
- D. Election of Board Member to Loan Committee

IX. Member Reports

X. Agenda/Program Requests for future Board of Directors Meetings

XI. Adjourn

The Redwood Region Economic Development Commission will, on request, make agendas available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof. Individuals who need this agenda in an alternative format or who need a disability-related modification or accommodation in order to participate in the meeting should contact the Board Secretary at (707) 445-9651. Notification 48 hours prior to the meeting will enable the Commission to make reasonable arrangements for accommodations.