

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

Board of Directors Meeting

August 2019



Samoa Peninsula Concrete Vault Art

MINUTES



HUMBOLDT BAY MUNICIPAL WATER DISTRICT
828 7th Street, Eureka



Minutes for Meeting of Board of Directors

July 11, 2019

A. ROLL CALL

President Woo called the meeting to order at 9:00 am. Director Rupp conducted the roll call. Directors Fuller, Latt, Rupp and Woo were present. Director Hecathorn was absent. General Manager John Friedenbach, Superintendent Dale Davidsen, Business Manager Chris Harris, and Board Secretary Sherrie Sobol were present. Maintenance Supervisor Ryan Chairez, and District Engineer Nathan Stevens were present for a portion of the meeting.

B. FLAG SALUTE

President Woo led the flag salute.

C. ACCEPT AGENDA

D. MINUTES

Director Fuller requested a clarification to her statement on page three of the minutes of June 13, 2019 regular meeting in regards to the DTSC. On motion by Director Rupp, seconded by Director Fuller, the Board voted 4-0 to approve the minutes of June 13, 2019 as amended.

E. PUBLIC COMMENT

No public comment was received.

F. CONSENT AGENDA

Director Rupp stated he is glad the District is active in regards to legislative advocacy. On motion by Director Rupp, seconded by Director Fuller, the Board voted 4-0 to approve the Consent Agenda.

G. CORRESPONDENCE

District letter to Humboldt County Board of Supervisors re: Zoning Text Amendments

Mr. Friedenbach stated he spoke with County staff who indicated they were just following language in the General Plan in regards to the zoning text amendments. Director Ford stated new uses of oil and gas extraction in TPZ zones and surface mining in AG zones would require a conditional use permit. The District would engage in the public process if the issue should come up. Director Latt requested clarification as to status of historical streamside mining. Mr. Friedenbach stated at a previous Board of Supervisors meeting, he requested the term "historical" be stricken. Director Ford and four of the five Supervisor agreed the term was vague and ambiguous. The Board of Supervisors voted 4-1 to strike the term "historical" from the zoning text.

District letter to FERC re: EAP Update

Every five years, FERC requires a complete review of the Emergency Action Plan (EAP). The letter to FERC conveys the review and update changes made. Mr. Friedenbach stated the District has not yet heard back from FERC. The update was also communicated to DSOD and they requested a few revisions. Staff is working on those revisions.

District letter to Senator Wieckowski re: SB 13 removal of opposition

Mr. Friedenbach shared the letter removing our opposition to SB 13 related to accessory dwelling units. The District previously submitted a letter opposing SB 13. Senator Wieckowski's office reached out and asked if the District would consider removing the opposition since ACWA, CMUA and CASA removed



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their opposition. Mr. Friedenbach confirmed with ACWA that they removed their opposition since the amendments to SB 13 on July 1 removed the prohibition preventing public agencies from assessing connection fees and capacity charges on newly constructed accessory dwelling units.

Letter from NCRWB re: HBMWD PS 3-No Further Action

Mr. Friedenbach shared good news regarding the monitoring well at Pump Station 3. Test results show non-detect so no further action is required. The well is officially closed and abandoned.

H. CONTINUING BUSINESS

Water Resource Planning

Local Sales

President Woo recused herself and left the room due to a possible conflict of interest. The firm she works for, SHN, was hired to do work for Nordic Aquafarms. Mr. Friedenbach reported that Nordic Aquafarms is still conducting their due diligence and they hope to be done by September. A meeting is scheduled with Nordic Aquafarms for July 22nd. Directors Latt and Rupp (Local Sales Committee) will be attending the meeting in addition to staff. President Woo returned to the room when the discussion was over.

Mr. Friedenbach stated the City of Trinidad is conducting a water supply study. Several years ago, the District hired GHD to conduct a study regarding the feasibility of a pipeline to Trinidad. Mr. Friedenbach stated it was his understanding that previously, Westhaven was opposed to this. GHD is conducting the water supply for Trinidad and will include the pipeline feasibility report.

Instream Flow

Mr. Friedenbach stated that President Woo and he traveled to Sacramento to make a presentation to the SWRCB. District Water Rights Attorney David Aladjem accompanied them to the meeting. Director Fuller and other members of the instream flow team were able to observe the meeting via WebEx. This was an introductory presentation. President Woo stated this was the first time communicating with upper level staff so it was a very good meeting. She added that Mr. Aladjem did a good job preparing them for the meeting with SWRCB. She also noted that Mr. Aladjem is being paid via grant funding. Director Fuller noted that SWRCB provided some specific questions to be answered and that was very beneficial. Mr. Friedenbach stated the Mr. Aladjem forwarded the questions to him.

Supervisor Madrone stated he applauds the District's efforts to protect their water and especially for instream flow as an environmental benefit. He also shared that he has heard from his constituents in Westhaven and Trinidad that they do not want a HBMWD pipeline to their area.

Cannabis Grows affecting Mad River Watershed

Mr. Friedenbach noted the article regarding cannabis raids in Hayfork and Ruth area referenced two parcels near Hale Creek. This is just downstream of the dam. Mr. Friedenbach reached out to Brendan Lynch of CDFW who will provide a presentation in the fall of the illegal cannabis enforcement activities by CDFW this season.

2019 Disaster Recovery Procurement Process

Mr. Friedenbach stated Collector 4 river work must be completed prior to the next rainy season this fall. Delaying the procurement approval to the August Board meeting could unnecessarily delay the project and staff is concerned the project may not be completed prior to the rainy season. Staff provided a couple of



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options. The Board expressed full confidence in Mr. Friedenbach and also agreed they could be available for a Special Meeting. On motion by Director Rupp, seconded by Director Latt, the Board voted 4-0 to authorize a Special Meeting to approve/award engineering and/or construction contracts.

Alliance Property-Phil Lazzar

Mr. Lazzar stated he has some concerns with the amendment as written. Currently, the amendment states there will be a forty-five-foot easement with a buffer of five feet on either side for a total of fifty-five feet. Mr. Lazzar is requesting a thirty-foot easement with a twelve and half foot buffer on either side for a total of fifty-five feet. Director Latt stated superficially, he doesn't see an issue but would like to receive input from the District's legal counsel.

Samoa Peninsula Concrete Vault Public Art Project: Artist Selections

Ms. Natalie Arroyo was present to share the selected artists and their projects for the concrete vault art work. She requested two more vaults be added, vault 8 at Samoa town south and vault 9 at Ma'lel Dunes. Staff did not have concerns with the addition of the two vaults. The Board concurred to the addition of the two vaults. Ms. Arroyo shared that twenty-nine applications were received and it was a tough decision to narrow it down to nine. She stated she appreciates working the District.

EAP Tabletop Exercise, September 12, 2019

Mr. Friedenbach stated FERC requires dam owners to conduct a Tabletop Exercise every five years. This year is the fifth year and the event will take place on September 12th at the USFS on Bayshore Way in Eureka. Mr. Friedenbach encouraged the Directors to attend.

I. NEW BUSINESS

Joint Board Meeting with Ruth Lake CSD July 19, 2019 draft agenda

Mr. Friedenbach shared the draft agenda with the Board and inquired if there was any input. No input was received. Due to closures on Highway 36, will need to meet at 6 am at the office in order to get to Ruth prior to the road closure.

Industrial Water Supply to Harbor District

Staff report

Mr. Friedenbach stated we need to look at starting to charge for the industrial system. Minimal maintenance has been done during the past ten years. The majority of the work has been channel control to ensure flows in front of Pump Station 6. Costs for the past ten years have been \$68,941.35. Mr. Friedenbach stated staff will bring back some proposal that include direct and tangential costs.

Internal cost analysis

Mr. Davidsen reviewed the Industrial System Rehab Costs. The \$2,477, 150.00 figure is for one screen only. The approximate cost to replace all components of the industrial system including: screens, valves, pumps etc. is \$4.2 million.

Technical memorandum re: clarifier

Mr. Davidsen shared the Technical memorandum by West Yost on the Mad River Clarification Treatment Facility. This a conceptual level study. The clarifier is like a smaller version of the treatment plant and will require three to four people to operate it. Mr. Friedenbach added that financing or grant funding is needed for this project.



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Humboldt County General Plan: Critical Municipal Water Supply Area

Mr. Friedenbach stated he inquired if the Mad River was designated as a Critical Municipal Water Supply area. Mr. Ford, Building and Planning Director, informed him it was not. Only two creeks are designated as such: 1) Francis Creek which supplies the City of Ferndale and 2) Luffenholtz Creek which supplies the City of Trinidad. Staff recommends the Board authorize staff to investigate further to determine what benefits could be achieved to protect the water quality of the Mad River Watershed by designating it as a Critical Municipal Water Supply Area.

Mr. Michael Richardson of Humboldt County Planning stated Critical Watershed Designation is used in reviewing development application standards geared towards preventing impacts to water supply, particularly upslope as it relates to runoff. Given the size of the Mad River, may need to get beyond the standard protocols and develop standards more specific to the concerns of the District. The District's concerns are more related to industrial pollution from uses on adjacent lands and may need to advocate to the Board of Supervisors to develop standards to offer these protections.

The Planning Commission will be the first step in the review process. The portions to be mapped as critical watershed can be tailored and it does not need to be the entire watershed. He doesn't know the schedule for Critical Watershed Designation but believes the list is long. The District should make a statement requesting the Mad River Critical Designation be moved up in priority.

Supervisor Madrone stated time is of the essence. The Board of Supervisors just approved various zoning text amendments, including the MR zone, that the District submitted concerns on. There are a lot of recommend zoning changes coming up. The Board of Supervisors is moving into the Community Planning phase and wrapping up the text amendment, then moving on to zoning. Time is of the essence for the District to clarify concerns regarding designating the Mad River as a Critical Watershed. He stated he would help agendize this.

The Board was supportive of staff recommendation. Director Latt stated he appreciated the attendance of two members of the Board of Supervisors as well as Michael Richardson. Supervisor Wilson stated he will check with his staff to find out where critical designation is on the Board of Supervisors list. Mr. Richardson reiterated the District should include a statement that they would like the issue prioritized. On motion by Director Rupp, seconded by Director Fuller, the Board voted 4-0 to direct staff to investigate and pursue designation of Critical Municipal Water Supply Area for the Mad River.

Supervisor Presentation -Reservoir Inspections

Maintenance Supervisor Ryan Chairez provided a presentation on reservoir inspection and maintenance. The inspections are performed annually to ensure the overall conditions of the reservoir are satisfactory and meet and exceed public water system standards. The inspections also provide an opportunity to take corrective action or plan for future repairs to address any developing issues. The documentation from the inspections are a tool used by state regulators to gauge the health and maintenance of reservoirs. Mr. Chairez provided details on items inspected, various reports and examples of maintenance and repair. Director Fuller stated she appreciates learning more about the District operation. She and the Board thanked him for the presentation.



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J. **REPORTS (from Staff)**

1. **Engineering**

Surge Tower Replacement (\$239,900 District Match)

Director Latt stated his firm represents Figas so he recused himself and left the room. Mr. Stevens stated the project is nearly complete. There are just a few miscellaneous items to clear up and some paperwork. All should be completed within a week. He stated there is a change order however, the project is still within the grant budget. Director Latt returned to the room when the discussion was over.

12kV Switchgear Replacement (\$441,750 District Match)

Engineering staff is moving forward on the 60% design. Hope to have this done by the end of the month. Discussions with PG&E regarding permitting have also started.

Collector Mainline Redundancy Hazard Mitigation Grants (\$763,000 District Match)

The project is still waitlisted.

Reservoir Structural Retrofit Hazard Mitigation Grant Application (\$914,250 District Match)

FEMA wants to schedule a kick-off call. This implies the project may get funded. It could still be six months to a year before Phase I funding is released. Staff will know more after the kick-off call.

Single Line Industrial Slough Crossing Hazard Mitigation Grant Application (\$679,750 District Match)

No update to report.

Matthews Dam Spillway Analysis Hazard Mitigation Grant Application (\$1,666,667 District Match)

No update.

Essex Emergency Chlorine Scrubber Hazard Mitigation Grant (\$335,000)

No update.

TRF Generator Hazard Mitigation Grant (\$460,431 District Match)

The full application has been submitted. It will be a few months before we hear anything.

Hazard Mitigation Grant DR-4431/4434 NOI Project Selection

Mr. Friedenbach stated staff met and discussed projects to consider. They came up with the 15" pipeline on the Samoa Peninsula. Mr. Stevens did some additional research and it looks like this project would not qualify. This round requires proposed project to be flood related mitigation projects.

2. **Financial**

Financial Report

Ms. Harris provided the June 2019 financial report. She noted the expenses are increased since it is the end of the fiscal year. Several vendors are grant reimbursable such as GHD and HT Harvey for example. The Salary and Employee Benefits budgets came in at 96% which means the District did a great job managing the budget. On motion by Director Rupp, seconded by Director Fuller the Board voted 4-0 to approve the June 2019 financial report and vendor statement in the amount of \$648,233.23.



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FY 18/19 Project Budget Reallocation Revision

Last month the Board approved a budget reallocation. As the Board is aware, the District has unfortunately, been forced to deal with many maintenance and emergency repairs. As a result, additional funds are needed in the category. Staff recommends un-allocating \$30,000 from the 3x Seismic Retrofit and allocating it the Emergency Maintenance Project Budget (total Maintenance & Repair Emergency Fund Budget \$80,000). On motion by Director Rupp, seconded by Director Fuller, the Board voted 4-0 to approve staff recommendation to reallocate \$30,000 from the 3x Seismic Retrofit to the Emergency Maintenance Project Budget.

FY19/20 Budget Presentation -Total Proposed Budget and Revenue Estimates

Ms. Harris provided a recap of the total proposed budget and revenue estimates. She noted that the health insurance rates came in lower than budgeted which is good news. On motion by Director Rupp, seconded by Director Latt, the Board voted 4-0 to approved the FY19/20 budget as proposed which included a 2.7% COLA.

Letter from County Treasurer summarizing interest earned report for quarter ending March 2019

Ms. Harris shared the County Treasurer's report for the quarter ending March 2019. The County earned an annualized interest rate of 1.85% compared to LAIF at 2.55%. Ms. Harris suggested the Board may want to have a future discussion to consider the possibility of switching to LAIF if the trend continues.

3. Operations

Mr. Davidsen provided the June Operational Report. Simpson Coatings was onsite to prep and do warranty paint repairs the 1 MG reservoir and Pacific Lift was onsite to the OSHA required inspection of the Vehicle Lift. Training included first aid and CPR, water regulations, total coliform rule 7 and sexual harassment prevention training. Mr. Davidsen stated seven staff members attended the water regulations training and it was one of the best trainings he's ever attended.

K. MANAGEMENT

CSDA GM Leadership Summit

Mr. Friedenbach reported out on his attendance at the GM Leadership Summit in Newport Beach. He shared some of the sessions he attended and thanked the Board for his attendance and continued learning.

CSDA Programs Promoting Good Governance

President Woo previously inquired about CSDA Board Certification Programs. Mr. Friedenbach provided information on the two certification programs: District of Transparency Certificate of Excellence and the District of Distinction Accreditation.

Annual July Board Meeting: Consider moving to third week of July

Mr. Friedenbach stated the July Board packet is usually due out around July 3 through 5. This is very difficult given the Independence Day holiday, end of month and end of fiscal year financials. For these reasons, staff recommends the Board consider moving the annual July Board meeting from the regularly scheduled second Thursday of the month to the third Thursday of the month. The Board did not express concerns with this.



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L. DIRECTOR REPORTS & DISCUSSION

1. General -comments or reports from Directors

Director Rupp reported out on his Employee Benefits Committee meeting. There is a zero percent increase in the PPO health insurance plans. The HMO plans increased 8.1%. Delta Dental increased 5.24% and EAP increased 9.4%. He noted that these had not increased at all over the past three years.

2. ACWA – JPIA

On-Site Training offered by ACWA/JPIA

Mr. Friedenbach shared the thank you letter from ACWA JPIA for the use of the facility for the on-site Defensive Driver and Ergonomics training.

Safe Drinking Water Funding Solution Trailer Bill Language Opposition to Inserts Related to AB 134 (Bloom) and AB 217 (Garcia)

ACWA is supportive of safe drinking water funding but is opposed to trailer bill inserts related to AB 134 and AB 217. Mr. Friedenbach shared the letter.

3. Organizations on which HBMWD Serves: RCEA, RREDC

RCEA

President Woo reported out on the RCEA meeting. She stated it was big meeting and the board gave approval for staff to start negotiations with three power providers, including Terra Gen, onshore wind. She recused herself from that part of the discussion since she has a potential conflict.

RREDC

Director Latt reported out on the RREDC meeting. He stated there was no speaker since they were evaluating their executive director. Like Mr. Friedenbach, their executive director is excellent and they are lucky to have him. He also shared that there are now two flights per day from Arcata to Los Angeles. The flights are 97% full.

ADJOURNMENT

The meeting adjourned at 2:56 pm.

Attest:

Sheri Woo, President

J. Bruce Rupp, Secretary/Treasurer



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SECTION D PAGE NO. 8



Minutes for Special Joint Meeting of HBMWD Board of
Directors with the Ruth Lake Community Services District
Board of Directors
July 19, 2019

The HBMWD and RLCSD Board of Directors held a Joint Board Meeting to discuss issues and events of mutual interest regarding Ruth Lake and the buffer strip. President Woo called the meeting to order at 1:00 pm. HBMWD Directors Fuller, Hecathorn, Latt, Rupp and Woo were present. General Manager John Friedenbach, Superintendent Dale Davidsen, Business Manager Chris Harris, Hydro-plant Operators Brian Newell and Dave Perkins, and Board Secretary Sherrie Sobol were also present. Ruth Lake CSD Directors Gordon, Johnson, Nicholson, Sellman and Wise were present. General Manager Adam Jager, Assistant Manager Cynthia Lofthouse and Dan Bugbee, Marina Manager were also present. Guests from Trinity County, STAR, US Forest Service, CHP and Sheriff's department were also present.

1. **Public Comment**

No public comment was received.

2. **Introductions**

Everyone introduced themselves and the agency they worked with.

3. **Updates from Guests:**

Trinity County

Mr. John Fenley, 5th District Supervisor apologized for missing the meeting last year and appreciated being invited to attend.

US Forest Service

Kristen Lark, Mad River Ranger District provided updates on the First 48, a timber and fuel reduction project to protect communities and water sources. The goal is to reduce fire starts and increase fire resilience.

Trinity County Volunteer Fire Department/STAR

Brooke Entsminger of STAR stated funding cuts have impacted their budget. They are working with the Trinity County Board of Supervisors to help find a funding solution. No representatives from the Fire Department were present.

Trinity County OES

Letty Garza, Director, and Amanda Braxton of OES provided updates. OES is no longer under the Sheriff's Department and is now part of the Health and Human Services Department. They recently conducted Code Red testing. If any Trinity County attendees did not receive the notification, they encouraged them to contact OES and register their number or if already registered, report an issue. OES is also pursuing Emergency 211. They received a grant for HAM radios and now have eighteen of them. They are aware of only one licensed HAM operator, so OES is actively recruiting for licensed operators.

Trinity County Sheriff

Wayne and Debbie Fackrell are back this year patrolling the lake. It has been five years since they were here last.

Ruth Lake Leaseholders Association

No representatives were present.



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CHP

Officer Thinnes provided an update. He is in the Ruth area at least once a week. The day of the week varies.

4. Ruth Lake CSD Topics

Aquatic Invasive Species:

Mr. Jager discussed the 2018 Annual Report. Most boaters are now familiar with the inspection process and there were no failed inspections last year. He and Mr. Bugbee attended Quagga Inspection training in Santa Rosa conducted by the Department of Fish and Wildlife (DFW). Both he and Mr. Bugbee are now certified trainers. Additionally, Mr. Breck McAlexander of DFW was able to provide training locally and Ruth Lake CSD now has an additional eleven employees trained as Quagga inspectors.

Dept. of Boating and Waterways Quagga Prevention Grant

Mr. Friedenbach reported out on the grant status. The 2017/18 is almost completed. The final invoices have been submitted. We have not heard back on the status of the 2018/19 grant application. The grant amount requested was \$70,000 and includes a decontamination station and moving Ruth Rec Campground Gate out of the flooding area as well as basic supplies and rock.

Lease Lots: area of concern

Mr. Jager will conduct dock and overall lease site inspections in September and October. He will provide reports then.

5. HBMWD Topics

Law Enforcement on Ruth Lake

Mr. Friedenbach thanked Wayne and Debbie Fackrell for returning and patrolling the lake. He shared that the District helps pay for enforcement efforts by contributing \$5,000 towards the cost of enforcement.

Algae bloom

Mr. Davidsen stated the lake had some bright colored algae blooms earlier this season and he sent samples in to the state for testing. The results came back that it was not blue-green algae. If additional algae occurs, he will send it in for testing if he is made aware of it. He stated he is not at the lake on regular basis and requested "if you see something, say something."

Cannabis Cultivation in the Mad River Watershed

Mr. Friedenbach commented on the recent multi-agency cannabis eradication at two sites near Hale Creek. Dr. Richard Kuhns, Trinity County CAO, stated the County now has three code enforcement positions. The County district attorney is currently using Civil Code 1720 to prosecute some of the illegal grows and it seems to be working well. Other agencies discussed some of their efforts/assistance in stopping illegal grows.



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ADJOURNMENT

The meeting adjourned at 1:30 pm

Attest:

Sheri Woo, President

J. Bruce Rupp, Secretary/Treasurer

CONSENT

MURAL MADNESS ON THE SAMOA PENINSULA

August 1, 2019 Kym Kemp 3 comments



Laci Dane painting her mural of a heron on a vault along New Navy Base Road.
[Photo provided]

Press release from the Peninsula Community Collaborative (PCC):

The Peninsula Community Collaborative (PCC) is excited to announce the selected artists for the Samoa Peninsula Public Vault Art Project – Laci Dane, Sheala Dunlap, Lucas Thornton, Julio Valdez, James Rose, Patricia Sennott, Charli Murphy, Ben Goulart, and Mir de Silva. These artists proposed murals with a variety of art styles, subject matter, and designs that fit well with the natural and human communities on the Peninsula.

A few artists have finished painting their mural while other artists are actively working. Many artists will be out painting during the Eureka Street Art Festival this weekend. The vaults are all along New Navy Base Road, Bay Street, Ma-le'l Dunes, and behind the Nature Center on Friends of the Dunes property.



Lucas Thornton's mural that is located across the street from Power Poles Beach

Take a short drive or ride to see and enjoy all the painted vaults along New Navy Base Rd and Bay Street! To see the vault on Friends of the Dunes property, take a short walk towards the beach from the Nature Center on Stamps Lane.

A special thank you to the Humboldt Bay Municipal Water District, Friends of the Dunes, and the Bureau of Land Management for working with the PCC to enhance the beauty of the Peninsula with public art. The PCC is a resident-led group seeking to improve the health and well-being of community members on the Samoa Peninsula (Manila, Samoa, Finnetown, and Fairhaven). The PCC's efforts are supported through grant funding from the St. Joseph Health Community Partnership Fund and by Redwood Community Action Agency (RCAA), the non-profit fiscal sponsor and support agency for the PCC.

3 COMMENTS

- **Julia**

August 1, 2019 2:09 pm

These are GREAT! Mir helps me out with my Landscaping at times, and she is a very talented Artist, as all of these other folks are as well.

- **Jan**

August 1, 2019 2:15 pm

I can appreciate the difficulty of changing in the round and Lacey d a n e is doing an incredible job. I can hardly wait for the opening when all this is shown

- **Yay**

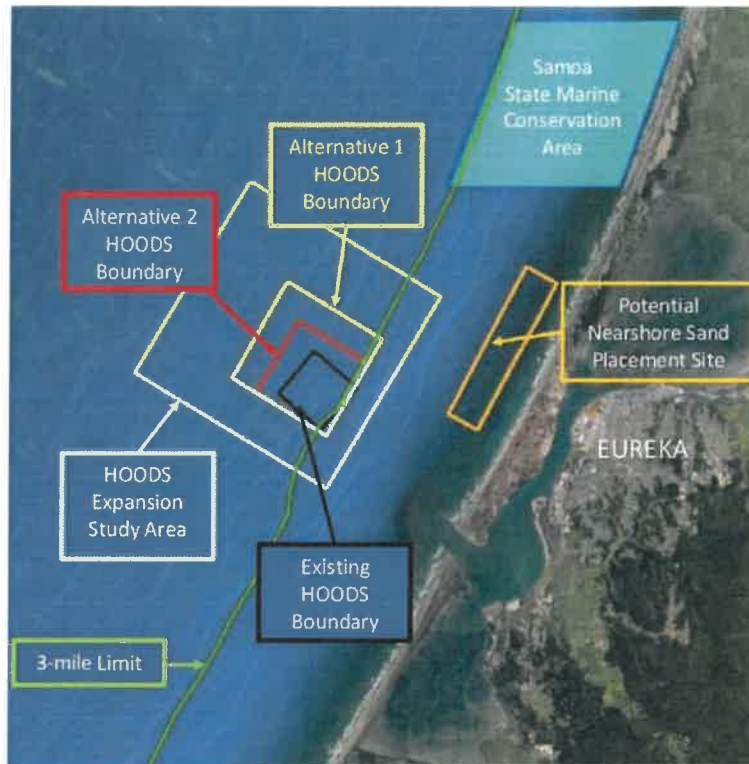
August 1, 2019 2:35 pm

So cool!!!!

HANK SIMS / MONDAY, JULY 22 @ 11:12 A.M. / ENVIRONMENT

Last Coast Outpost

Federal Agencies Looking to Expand Humboldt County's Open Ocean Dumping Grounds, Where We Put All the Dredge Spoils



HOODS and alternatives for HOODS expansion. Graphic: EPA.

If you want ships or boats in Humboldt Bay, you have to dredge it. Every year, nature does its damndest to fill in the bay with sand and silt and make in un navigable.

And if you're going to dredge the shipping channels and harbors of Humboldt Bay — or if you're going to dredge the very entrance to the bay, as you absolutely have to do — you have to dump all the stuff you dredge up someplace.

To date, that place has been HOODS — the Humboldt Open Ocean Disposal Site, a patch of sea a few miles off our shore. But now comes word from two federal agencies — the Environmental Protection Agency and the U.S. Army Corps of Engineers — that HOODS is almost all full up, and we need to expand its boundaries if we want to keep dumping that earth into the sea. Those agencies will be holding public meetings on the topic on August 5.

One expansion option that will likely be of great interest to local dredgers is the possible addition of a "nearshore sand placement site," which looks like a place people could simply pump the spoils to, rather than loading them up on barges and

taking them out to the deep ocean — the much more expensive option that local agencies have been required to employ.

Notice from the Environmental Protection Agency below:

NOTICE OF PUBLIC INFORMATION MEETINGS:

PROPOSED EXPANSION OF THE HUMBOLDT OPEN OCEAN DISPOSAL SITE (HOODS)

- **Purpose:** Get information and provide early input about the planned enlargement of the existing HOODS disposal site 3 miles offshore of Humboldt Bay
- **When:** There will be three opportunities on Monday, August 5, 2019: 10-11:30 am 2:30-4:30 pm, and 7:00-8:30 pm
- **Location:** Humboldt Bay Aquatic Center, Room 203 921 Waterfront Dr, Eureka

In order to maintain safe navigation for recreational and commercial vessels, approximately 1 million cubic yards (cy) of clean sediment is dredged from Humboldt Bay each year. An environmentally appropriate disposal site for this sediment is crucial to the maritime-related economy of the region. The Humboldt Open Ocean Disposal Site (HOODS) was established for this purpose by the Environmental Protection Agency (EPA) in 1995, and to date over 25 million cubic yards of clean sediment has been successfully disposed at HOODS without any significant adverse environmental impacts.

EPA and the US Army Corps of Engineers (USACE) carefully manage disposal at HOODS to ensure that the dredged sediment does not create a mound high enough to affect waves and the safety of vessels entering and exiting the Bay. But today HOODS is effectively reaching full capacity and needs to be expanded so that dredging for safe navigation in the Bay can continue.

EPA and USACE are holding scoping meetings to hear your thoughts and ideas about expanding HOODS. We will give an overview of the studies EPA has conducted around HOODS, summarize the alternatives we are considering for expanding the HOODS boundaries, and describe potential future options for placing clean dredged sand nearshore to help buffer against sea level rise, rather than continuing to dispose of it all offshore. Once an Environmental Assessment is completed there will be additional public comment opportunities, and we will also submit the proposed plan to the Coastal Commission for their Federal Consistency review. We look forward to hearing from you!

EPA and USACE are preparing an Environmental Assessment to expand the boundaries of the existing Humboldt Open Ocean Disposal Site (HOODS), which is nearing full capacity. Shown above are two HOODS boundary expansion alternatives in relation to the existing HOODS boundary, the 3-mile limit, the Samoa State Marine Conservation Area, and Humboldt Bay. Also shown is the location of a potential future Nearshore Sand Placement Site.

Eureka annexes coastal property that faces sea-level rise dilemma

City has no set plans for Brainard site yet



The city of Eureka finished annexing the Brainard site adjacent to Highway 101. Though there are no plans for new development there, Robert Holmlund, Eureka's director of development services, said the city is supportive of development there that would produce jobs. (Shaun Walker — The Times-Standard)

By [SONIA WARAICH](mailto:swaraich@times-standard.com) | swaraich@times-standard.com |

PUBLISHED: July 24, 2019 at 7:40 pm | UPDATED: July 24, 2019 at 7:40 pm

The city has annexed its first piece of property since the 1980s, but there may be issues with flooding on the property down the line.

After years of talking about it, the city of Eureka has extended city limits to include about 100 acres just north of the city along U.S. Highway 101 known as the Brainard site. The area is currently the home to property owned by the California Redwood Company, which is zoned for industrial uses; a portion of a Highway 101 right-of-way; and a railroad right-of-way owned by Northwestern Pacific Railroad Company.

"This was driven by the property owner because right now they're not connected to water or wastewater systems," said Robert Holmlund, Eureka's director of development services. "The city cannot really connect to properties outside of city limits."

There are no current plans to extend water or wastewater service to the property, but that would likely need to happen if new development was proposed on that land. At

that time, the Coastal Commission would need to approve any changes, but the commission expressed concern that the area is going to become inundated as the sea level rises.

"I fundamentally disagree with the Coastal Commission," Holmlund said. "We're talking about 80 years from now. That's generations of businesses."

One local sea-level rise expert, Alderon Laird, has speculated there could be as much as a foot of sea-level rise by 2030, two feet by 2050 and more than five feet by 2100.

Even though the area will be inundated in a century, Holmlund said there was no reason to limit the development of the site while it is still usable, though the process of development would be long and require significant investments.

The site is protected by a robust seawall, Holmlund said, so the potential for flooding would come if Highway 101 became inundated and water entered the property that way. That assumes Caltrans would let Highway 101 go underwater, which Holmlund said he doubts would happen.

Myles Cochrane, Caltrans District 1 public information officer for Humboldt and Del Norte counties, said the improvements that are planned for Highway 101 are not specifically going to address sea-level rise, but everything will be designed in such a way as to allow for the highway to be altered as the sea level does rise.

While Caltrans "did not strictly oppose annexation," Cochrane said the department has had concerns about an agricultural access at the southern end of the property.

"We look forward to working with the city of Eureka on logistics moving forward in such a way that sustains safe and efficient transportation priorities while at the same time improves economic opportunities," Cochrane said.

Gary Ryneanson, manager of forest policy and communications with the Green Diamond Resource Company that manages the site, said there are no current plans to develop the property or make changes for access to U.S. Highway 101.

"Any future development will have to address any increased traffic," Ryneanson said. "However, the proposed Caltrans safety corridor improvements should help mitigate increased traffic from the Brainard property."

Because there are no current plans to develop the site, it's unlikely many of the concerns will come to a head until new development is proposed. Holmlund said if the site were developed, it could provide much-needed jobs for the area.

"The potential development for that site is really exciting," Holmlund said. "It's ultimately up to the property owner, but the city will be very supportive of development there."

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

Toward a ‘digital future’ for Humboldt County: broadband project expected to be completed in 2021

Efforts to bring greater internet access to rural areas underway for past decade

By [SONIA WARAICH](#) | swaraich@times-standard.com |

PUBLISHED: July 26, 2019 at 8:06 pm | UPDATED: July 26, 2019 at 8:08 pm

Plans to bring broadband to unserved and underserved communities in the county are well underway and should be completed by 2021.

ADVERTISING

Inyo Networks held a scoping meeting attended by roughly 30 people on Thursday at the Wharfinger Building in Eureka to gather the concerns of residents adjacent to state Route 299, where the company has plans to install broadband.

Connie Stewart, executive director of the California Center for Rural Policy at Humboldt State University, said getting to this point was “a key milestone.”

“We’re hoping to get those permits early next year so we can begin the building phase,” Stewart said.

The concerns of residents were nothing insurmountable, said Michael Ort, chief executive officer of Inyo Networks, because the project didn’t have an impact on many of the things they were worried about.

For instance, some property owners had concerns that the project would be going through their properties or installing poles on them, but Ort said the project will be underground and staying along public roads.

“There’s one piece of property we’ll be going onto,” Ort said, “but we got permission from the owner.”

Other concerns were that the project might install loud equipment, which wouldn’t happen, or pass through habitats of endangered species like the spotted owl, Ort said.

“There may be a couple areas where we are, but basically we’re not cutting any trees down,” Ort said.

Moving forward, Ort said he expects a complete environmental impact report on the project to be out in November or December, after which the public will be given the opportunity to provide feedback. If all goes well, Ort said the company should receive all of its permits in January or February, after which it can begin construction.

“Our expectation is that we’ll have the construction done — the main line — in about 18 months,” Ort said, with a likely completion date around July 2021. “And then it’ll take us

an additional six to nine months to make all the connections to schools, hospitals, government buildings and things like that.”

Stewart initially contacted Ort about bringing broadband to the area and said the community has been supportive of the efforts.

“Our community is well aware of how desperately we need additional connectivity,” Stewart said. “We have more people in our region than in any other region in the state that lack adequate broadband.”

California has begun to recognize how important every part of the state is, Ort said, regardless of how rural, and has been supportive of efforts to bring broadband to the area. Ort said local leaders in areas like Blue Lake have also been offering technical assistance as the project gets closer to the construction phase, such as the best path for the line.

“We’ve waited for 10 years to get to this point,” Stewart said. “It’s pretty exciting.”

The process began more than a decade ago and included a study titled “Redwood Coast Connect” that examined the supply and demand for broadband in Del Norte, Humboldt, Mendocino and Trinity counties.

That report found that 63% of 556 people surveyed considered internet access at home to be very important or critical. Of the 556 people, 11.6% didn’t have an internet subscription, 4.8% weren’t sure or didn’t know, 32.8% had dial-up, 5% had satellite and 45.7% had access to broadband.

Thirteen communities, including Hoopa, Willow Creek and Kneeland, had low internet access. A roughly equal number of communities — 14, including Orleans and Weott — had none.

“It’s really important that we build the infrastructure that’s needed for the next economy,” Ort said. “The digital economy.”

About 70% of 212 businesses surveyed said it was very important or critical.

Rural parts of the state are facing challenges with that because it’s not economically advantageous for a lot of the current service providers, Ort said. The area is also expensive to build broadband networks in because of its mountainous topography.

However, Ort said his concern was “just that the North Coast region is going to have a digital future.”

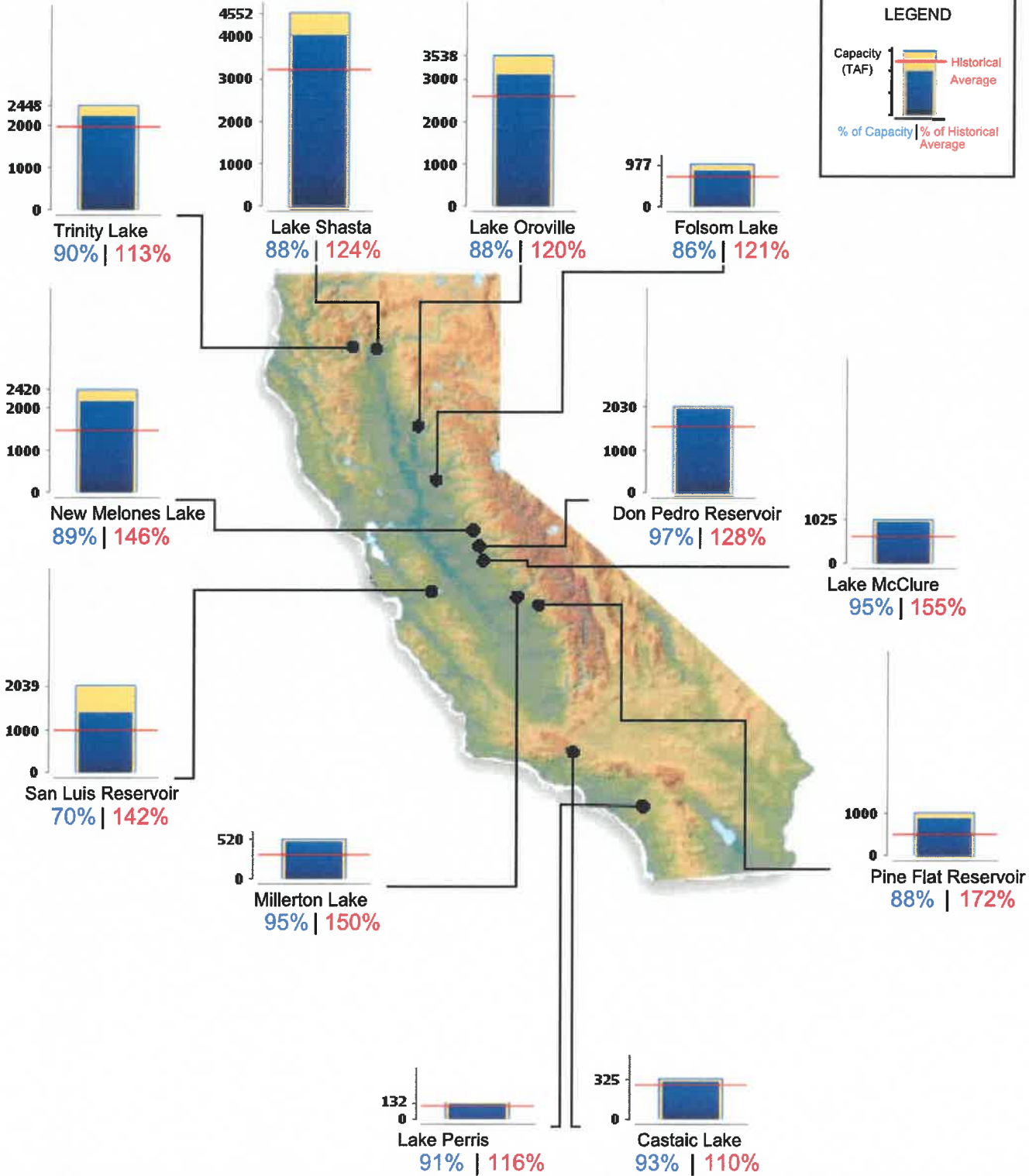
Sonia Waraich can be reached at 707-441-0506.



Reservoir Conditions

Ending At Midnight - July 31, 2019

CURRENT RESERVOIR CONDITIONS



*Times Herald***Where'd the beach go? Lake Tahoe fills to the top as massive winter snows melt**

Beaches smaller, boat docks higher, and billions of gallons more water in the lake



The idyllic 55-acre Sand Harbor at Lake Tahoe offers white-sand beaches, coves and water sports, including kayaking and stand-up paddle board. (Go Tahoe North)

By **PAUL ROGERS** |

PUBLISHED: July 12, 2019 at 9:06 am |

UPDATED: July 12, 2019 at 3:28 pm

LAKE TAHOE — If you visit Lake Tahoe this summer, the beaches might seem a little smaller than they were a few years ago.

It's not an optical illusion. Large sections of them really are underwater.

Dozens of feet of snow that blanked the Sierra Nevada this winter, generated by blizzards from raging atmospheric river storms, have been steadily melting all spring and summer, sending billions of gallons of water rushing downhill and steadily raising the water level at Lake Tahoe.

Sometime, probably this weekend depending on the exact temperature, the lake's level will reach its maximum legal limit — 6,229.1 feet above sea level — a point that federal officials maintain by releasing water from the gates of the lake's only dam — the 18-foot-high Tahoe Dam, near Tahoe City — into the Truckee River. On Friday, the lake was less than an inch from that peak level and still rising.

The surface of Lake Tahoe, which stretches 22 miles long, has risen an astounding 8 feet since the beginning of 2016, when it hit a low point during California's historic 5-year drought.

Put in perspective, all the extra water in the lake now that wasn't there three years ago is roughly 1 million acre-feet, or 313 billion gallons — enough water to meet the needs of 5 million people for a year. Lake Tahoe's rise over the past three years is the same as if Hetch Hetchy Reservoir, the main water supply for San Francisco, had been emptied into it nearly three times.

In other words, Tahoe is full. Right to the top.

"Standing on the shoreline it's a huge difference," said Dave Wathen, deputy water master for Lake Tahoe. "There were big beaches at lower water levels. Sand Harbor Beach near Incline Village is a very big beach. A lot of people could fit on it. Now, it's tighter. It's drastically different."



Lake Tahoe's water level is 8 feet higher now than it was in 2016, during California's historic 5-year-drought. (Compass)

Higher water not only means smaller beaches, but higher boat docks, and in some places shoreline erosion. It also means ample water supplies for towns around the lake, cities like Reno, and farmers from Reno to Fallon, Nevada, all of whom depend on Lake Tahoe every year for irrigation and drinking water.

This summer will be the third time in the last three years that the lake has come right up to the edge of its legal limit. The last times that happened were 20 years ago, in 1998, 1999 and 2000.

California's drought was broken by enormous storms in 2017 that caused flooding in downtown San Jose, wrecked the spillway at Oroville Dam, and dumped so much snow that some Tahoe-area ski resorts had to close for days to dig out their chairlifts.

From New Year's Day until the summer of 2017, the lake rose more than 6 feet, the most ever recorded in more than 100 years. When 2018 rolled around, the snowfall was a little below normal, but higher lake levels from the year before allowed the melting snow to fill it again to the top. Now with this year's big winter Sierra snowpack, which was 162 percent of the historic average on April 1, Tahoe is in great shape, experts say.

The history behind Tahoe' rise and fall is complex. After the level rose dramatically in 1907 following a big winter, causing flooding, property owners, farmers, ranchers, the local utility company and other powerful interests battled in court over water rights and how to control the lake's height.

A 1935 legal settlement set the maximum level at 6,229.1 feet and doled out water rights and rules. The settlement is administered by two federal water masters in Reno, who monitor the lake's level multiple times a day. Although 63 creeks and streams flow into Tahoe, it has only one outlet, the Truckee River, where the 109-foot long concrete Tahoe Dam, built in 1913 with 17-gates, is listed on the National Register of Historic Places.

It's not just depth. The lake's famed clarity increased 10 feet from 2017 to 2018, according to an annual report released by UC Davis scientists in May.

The jump was the largest annual improvement in 50 years, since measurements at the iconic Sierra Nevada lake began in 1968.

On average in 2018, the study found, a 10-inch white disk lowered from a research boat was visible 70.9 feet below the water's surface. A year before, the disk could be seen only up to 60.4 feet, the lowest visibility level ever recorded.

The reason for the huge loss of clarity in 2017, scientists said Thursday, was that heavy rains in the winter of 2016-17 washed massive amounts of sand and mud that had built up during the drought into the lake. In fact, more sediment washed into the lake in 2017 than the previous five years combined. The big drop-off in clarity alarmed environmental groups, tourism leaders and many Tahoe lovers.

In 2018, however, following a relatively mild winter, not as much sediment washed in, returning the lake to a more normal pattern and boosting visibility.

Overall, the lake still has a long way to go to recover the level of clarity it had half a century ago. In 1968, Tahoe's visibility was 102.4 feet, but declined due to erosion from construction, fertilizer from golf courses, and loss of wetlands that filter pollutants and other human disruptions.

During the past 20 years, the state, federal and local governments have spent hundreds of millions of dollars restoring wetlands, tightening building rules and making other changes to try and stop the 1,645-foot deep lake — America's second-deepest, behind Crater Lake — from becoming a muddy green mess of algae and silt.

That work, highlighted in "Keep Tahoe Blue" bumper stickers, has shown slow but steady progress.

The five-year average in lake visibility — widely considered an indicator of the Lake Tahoe basin's environmental health — is now 70.3 feet, an increase of almost a foot from the previous five-year average.

And while the beaches might be smaller, there are plenty of places to tie up your power boat.

"During the drought, you'd look down at the end of a dock, and you'd see sand because the water had receded so far," said Geoff Schladow, a professor of civil and environmental engineering at UC Davis who directs UC's Tahoe Environmental Research Center.

"You couldn't put a boat in some places. Now the docks all have plenty of water around them."

Climate change threatens California freshwater fish. We can do something about it, experts say.

BY CAROLINE GHISOLEI

JULY 12, 2019 02:00 AM, UPDATED JULY 12, 2019 02:43 PM

Fish die-offs in freshwater lakes are an increasing threat in California, and experts say climate change is to blame.

Researchers from UC Davis and Reed College in Portland, Ore., found a strong link between fish deaths in freshwater lakes in Wisconsin and hot summers. They predict that fish die-offs will double by 2050 and quadruple by 2100 in Wisconsin.

Andrew Rypel, a UC Davis wildlife, fish and conservation biology researcher, said we should expect similar effects in California.

He told The Bee in an interview that California lakes may be even more vulnerable to the effects of climate change than those in Wisconsin, because they host many sensitive cold-water species.

“Freshwater species are uniquely challenged by climate change,” Rypel said. “Marine fish or migratory waterfowl, like ducks, can just move north as climate change occurs, but fish in lakes... they can’t really do that: migrating isn’t an option.”

But Rypel said there are ways to protect Californian fisheries - a \$5.2 billion industry that employs nearly 40,000 people every year, according to the American Sportfishing Association. We can’t control water temperatures, Rypel said, but we can make fish populations stronger.

“This is actually a big focus in California, they call it resilience: adding resilience to the fish population,” he said.

WHY AND WHERE ARE FISH DYING?

“We know very little about how climate change is going to affect lakes and lake fisheries,” Rypel said.

“This study is one of the first that tries to connect the dots.”

Turns out, Rypel said, that fish kill-offs are pretty easy to predict: the higher the summer temperatures, the more the fish deaths.

“Fish breathe oxygen just like we do and oftentimes bad conditions temperature-wise can also be bad oxygen-wise,” he explained, “so if you’re a cool-adapted species of any variety, warm temperatures are generally not good for you and you could be subject to kill.”

The California Department of Fish and Wildlife has also been looking into the effects of climate change on freshwater fish populations. In a 2014-2017 report, the department studied fresh waters in counties across the state. In the Central Valley, they focused on three counties: Butte, Sacramento and Yuba.

They found that high summer temperatures were not only worsening the quality of the water, but drying out freshwater bodies that hosted endangered species. “The effects of the drought often resulted in higher water temperatures,” officials wrote in the study. “Aquatic species were frequently stranded as streams dried.”

Even when the 2011 drought ended in March 2017, temperatures still rose above 59-64 degrees Fahrenheit (15-18 degrees Celsius), endangering salmon and steelhead. That’s the same year that officials in Lake County, north of Sacramento, found “dead fish islands about the size of three football fields,” KTVU reported.

Officials detected hundreds of fish kill-offs during the study in all three counties and five freshwater bodies they analyzed: Butte Creek, Big Chico Creek and Feather River in Butte County; American River in Sacramento County; and Yuba River in Yuba County. And they predicted the problem could worsen.

“Future climate change predictions suggest that these threats may increase in frequency and severity in the coming years, potentially adversely affecting fish and other aquatic resources,” according to the report.

WHAT CAN WE DO ABOUT IT?

Rypel says that to prevent fish die-offs, we’ve got to make fish more resilient. “How do you do that? Well, you can’t really control the temperature,” he said, “so what you have to work on factors you can control.”

The UC Davis study found that the two main factors to pay attention to are harvest rates and land use. An easy fix, Rypel said, is to add vegetation around lakes to protect them from contamination. “Phosphorus pollutants like fertilizers that enter the lake can exacerbate the frequency of fish kills,” he said, “so finding ways to mitigate or lessen the amount of phosphorus that enters the lake could be very important.”

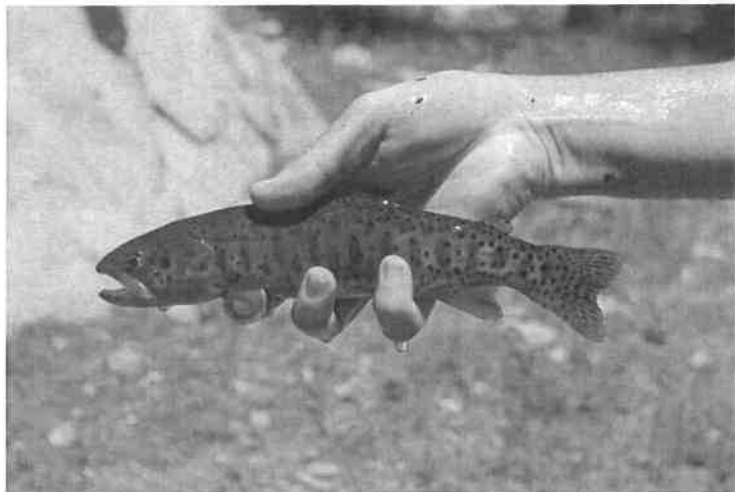
Local communities could also “soak up some of that pollution” by creating more public lands that have high proportions of wetlands.

“If you know that certain lakes are going to be especially vulnerable to climate change, those are places where you want to incentivize ... people to work towards better land use: that’s the key, and that’s the way we should be thinking about this,” Rypel said.

And if people don’t care about the effects fish die-offs will have on the environment, he encourages them to consider the more tangible advantages of protecting California fisheries.

“There’s an argument for doing what’s right,” he said, “but there’s also an economic argument to it: (this) is going to affect the economy and we need to come up with ways to mitigate the effect.”

Meanwhile, efforts to monitor water temperatures, water flows and fish populations continue, the California Department of Fish and Wildlife told the Bee in a statement. “Having identified areas where additional resources are needed allows our agency to prioritize watersheds and species specific data collection that is needed to manage that population,” Senior Scientist Tracy McReynolds said.



Climate change is threatening salmons and steelheads in California freshwaters. Researchers at UC Davis and Reed College, Portland, found a link between declines in fish populations and hot summer temperatures. *CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE*

CAROLINE GHISOLFI

916-321-1923

Caroline Ghisolfi, from Stanford University, is a local news reporter for The Sacramento Bee, focusing on breaking news and health care. She grew up in Milan, Italy.



Pulitzer Prize-winning, non-profit, non-partisan news organization dedicated to covering climate change, energy and the environment.

Global Warming Is Pushing Pacific Salmon to the Brink, Federal Scientists Warn

The fish, critical to local economies and the food chain, were already under pressure from human infrastructure like dams. Climate change is turning up the heat.

BY BOB BERWYN, INSIDECLIMATE NEWS

JUL 29, 2019



Sockeye salmon that swim the long journey up the Columbia River and into the Snake River in Idaho to spawn are among those most at risk. Credit: Mark Conlin/VW PICS/ UIG via Getty Images

Pacific salmon that spawn in Western streams and rivers have been struggling for decades to survive water diversions, dams and logging. Now, global warming is pushing four important populations in California, Oregon and Idaho toward extinction, federal scientists warn in a new study.

The new [research](#) shows that several of the region's salmon populations are now bumping into temperature limits, with those that spawn far inland after lengthy summer stream migrations and those that spend a lot of time in coastal habitats like river estuaries among the most at risk.

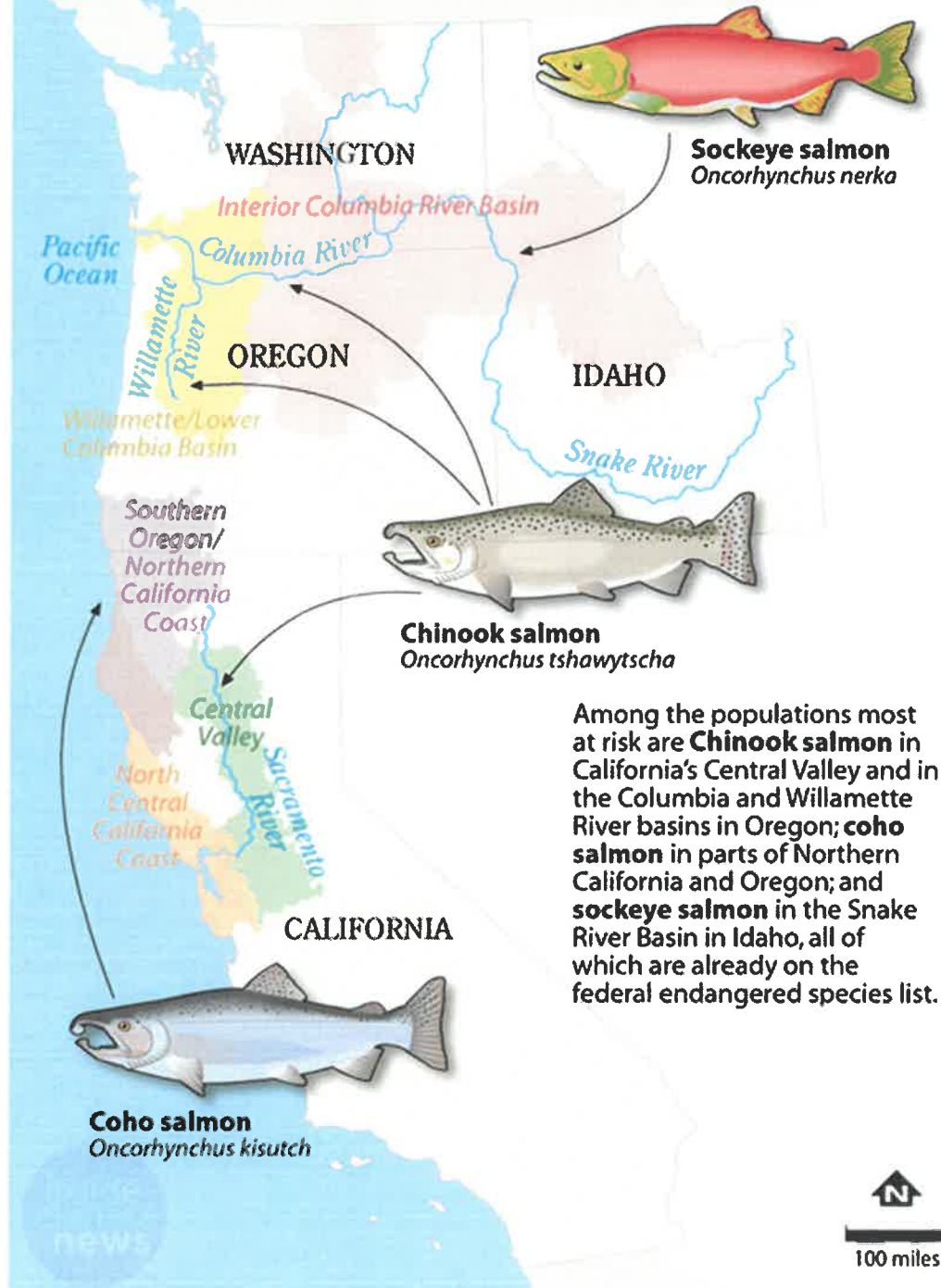
That includes Chinook salmon in California's Central Valley and in the Columbia and Willamette River basins in Oregon; coho salmon in parts of Northern California and Oregon; and sockeye salmon that reach the Snake River Basin in Idaho, all of which are already on the federal endangered species list.

These populations will need help to survive the warmer waters, more acidic oceans and changed seasonal streamflow patterns caused by global warming and other human impacts, said Lisa Crozier, a salmon researcher with the National Oceanic and Atmospheric Administration Fisheries program and lead author of the study, published July 24 in the journal PLOS One.

"They are very resilient and opportunistic. That's why we have hope. We just have to give them half a chance," she said.

Rising Temperatures Putting Salmon at Risk

New research shows that several salmon populations in the Pacific Northwest and California are hitting their temperature limits. Those that spawn far inland after lengthy summer stream migrations and those that spend a lot of time in coastal habitats like river estuaries are among the most at risk.



Among the populations most at risk are **Chinook salmon** in California's Central Valley and in the Columbia and Willamette River basins in Oregon; **coho salmon** in parts of Northern California and Oregon; and **sockeye salmon** in the Snake River Basin in Idaho, all of which are already on the federal endangered species list.

SOURCE: Crozier, et al. 2019

PAUL HORN / InsideClimate News

The salmon live much of their lives in the ocean, but they swim far upstream to spawn. In the process, they're a key part of the food chain, including for bears and whales, and they are important to indigenous groups and fisheries along the U.S. West Coast.

Human infrastructure, including dams and water diversions, were already affecting their streams, reducing the flow and reducing access to the coldest habitats that can serve as a hiding place for salmon during heat waves or drought. Global warming is now intensifying those impacts.

The salmon populations that have persisted in Western rivers since the dam-building era have adapted to some of that warming, and their sensitivity to climate factors has been incorporated in conservation plans, Crozier said.

But beyond 2 degrees Celsius of warming (3.6 degrees Fahrenheit) compared to the pre-industrial era, all bets are off, she said, because then the chances increase for significant changes in the ocean that could lead to a catastrophic failure of salmon populations.

Timing Is Everything

Some salmon migrations coincide with high spring runoff from melting mountain snows, while juvenile salmon return to the sea in sync with seasonal plankton blooms off the coasts.

Global warming is already disrupting those cycles for some salmon populations, including sockeye that swim 900 miles to spawn in streams high in the mountains of Idaho.

To spawn successfully, they need exactly the right combination of stream flows and temperatures at exactly the right time of year. But warmer temperatures are rapidly **changing the timing of snowmelt and runoff** in Western mountains, making it harder for the fish.

Snake River sockeye are **listed as endangered**. In some streams, only a few hundred reach their spawning grounds. Their overall numbers **grew slightly** between 2008 and 2014 (the most recent numbers available), thanks mainly to conservation measures, including the introduction of hatchery-raised fish to bolster the population after Snake River sockeye nearly disappeared from the region.

Sometimes they need human help to reach their goal, so they're transported past dams in an "assisted migration," which might become an important (and expensive) strategy to adapt to global warming for other species, as well.

Chinook salmon in California's Central Valley face even more daunting challenges, and some of those populations might be the first to blink out, said University of California, Santa Cruz, researcher Mark Carr, who studies salmon in their coastal habitat.

"These runs down in central California may simply not persist in the face of a changing climate and water conflicts. Can't say they are lost causes, but they are the most likely candidates," said Carr, a co-author on the new study.

"It's frustrating," he said. "I work on many species other than salmon, so it's pretty overwhelming to try to identify how to mitigate or adapt to the growing impacts to so many species simultaneously. It's even

more frustrating to know that some policies, particularly the current administration's, are fully counterproductive to the work."

The Central Valley Chinook also have to compete with humans for water, and they are already losing that contest. The greatest salmon declines are where the greatest conflicts over water occur, including the demand for agricultural water in the Central Valley.

"California has a long history of destroying the freshwater ecosystems required to maintain strong salmon runs," Carr said. "If we want salmon around in the future, we need to start working to ensure we have healthy freshwater ecosystems that will better tolerate the changing environmental conditions."

How Climate Change Threatens Salmon Survival

The new study covered 33 salmon populations along the U.S. Pacific Coast, from the Mexican border to the Canadian border, assessing how local environmental conditions will change and whether salmon populations will be able to adapt to the changing climate.

The research spells out several ways that global warming endangers the fish. Among them:

- Young salmon die when the water warms above a certain threshold, and droughts can leave salmon stranded or exposed to predators by low water levels.
- Flooding can also flush eggs and young fish from their nests, so the scientists included projections of how global warming will affect extreme atmospheric river rain storms in California as one of the ways to measure the growing threat.
- Warmer stream temperatures have also **increased outbreaks of fish disease** that can affect salmon, including pathogenic parasites. In May, a toxic algae bloom along the coast of Norway **killed 8 million farmed salmon** at an estimated cost of about \$82 million. In Alaska's Yukon River, **a parasite linked with global warming** has taken a big toll on the salmon fishery. And in recent weeks, local indigenous observers in Alaska have **posted** numerous reports of dead salmon in rivers in the western part of the state, as water temperatures reached record highs during **Alaska's record-setting heat wave**.
- Salmon are also sensitive to **changes in ocean currents** that carry nutrients, as well as sea level rise, which affects the physical connection between ocean and stream ecosystems, like **coastal wetlands in California**. Some salmon populations living near the edge of the range of suitable conditions will start to cluster in rivers near the coast, unable to reach their historic spawning grounds unless "access to higher-elevation habitats is restored and habitat quality in rearing areas and migration corridors is improved," the scientists wrote.

Crozier said scientists worldwide have been documenting "almost synchronous declines in salmon populations. Time after time, we see the same patterns of long-term decline." For example, global research shows that climate change is expected to **reduce reproductive success** and jeopardize salmon migration.

Most types of fish are affected by global warming. **Research** last year showed many species important to U.S. coastal communities will move hundreds of miles northward during the next few decades.

Some salmon will also move northward seeking cooler waters, and that is bad news for West Coast tribes whose place-based fishing rights are linked to pre-colonization fishing grounds. Native American communities can't just relocate to another area to catch their allocation if the fish move away, said Tom Moore, an oceanographer with the [Northwest Indian Fisheries Commission](#).

What Can Be Done to Protect the Fish?

Maintaining any salmon populations will require significant restoration efforts to make sure they have large areas of connected habitat, the researchers wrote.

Other conservation strategies include releasing hatchery-spawned salmon, boosting streamflows at the right time with water releases from reservoirs, and even assisted migration, in which some fish are trapped, transported over dams and then released in rivers above the dams.

Carr said the study will help conservation efforts because it shows exactly when and how salmon vulnerability is highest at different stages, with the freshwater environment the key.

To sustain themselves, adults need to be able to successfully migrate to spawning habitat, and survival of the eggs and larvae require cool water temperatures, appropriate gravel structure, sufficient water flow and oxygen while eggs are in the sediments. And finally, there has to be enough water flow to allow them to migrate back to the sea.

"All of these are changing in ways that threaten the survival of salmon runs," he said.



July 11, 2019 | Written by Kristian C. Corby

Five Things You Need to Know About SB-200: California's Proposed Clean Drinking Water Fund

The California Legislature recently passed SB-200 that will create an annual fund of \$130 million to tackle the state's drinking water problems. Approximately one million Californians do not have access to clean drinking water due to natural or man-made causes. SB-200 will give public agencies, nonprofits, public utilities, mutual water companies, tribes, and groundwater sustainability agencies the opportunity to apply for funding to remediate their drinking water problems. Governor Newsom is expected to sign the bill into law. Here are five things you need to know about SB-200:

- Originally, the Governor proposed a tax on residential water use to address the problem, but state lawmakers were wary of approving a new tax in a year when they had an estimated \$21.5 billion surplus. SB-200 will use money from the State's cap and trade fund, which generates revenue when entities purchase credits to emit greenhouse gases.
- The bill makes \$130 million available per year through 2030 to help water providers with their operating costs, including consolidating smaller water districts to help improve their management and finances.
- The fund created by SB-200 can also be used to purchase replacement water when a particular water supply is too contaminated for use.
- The bill establishes the fund within the State Treasury, and puts the State Water Resources Control Board in charge of administering the fund and creating the criteria for how the money will be awarded to qualified recipients.
- The Senate analysis for the bill shows that it received broad support from agricultural groups, water providers, environmental non-profits, and more, while receiving no opposition.

For questions or additional information please contact Kristian Corby at kcorby@somachlaw.com.

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Office of Governor
GAVIN NEWSOM

Safe Drinking Water Fund

Published: Jul 24, 2019

In his first week in office, Governor Newsom proposed providing permanent funding for safe drinking water projects to help more than 1 million Californians without access to clean drinking water

SB 200 establishes a stable ongoing fund to help communities access safe drinking water

SANGER — Governor Gavin Newsom today signed SB 200 by Senator Bill Monning (D-Carmel), which establishes the Safe and Affordable Drinking Water Fund to help local water systems provide safe drinking water.

In his first week in office, Governor Newsom proposed creating a permanent fund source for safe and clean drinking water projects. More than 1 million Californians lack access to clean drinking water at home, work or school, which negatively impacts their everyday life.

“The fact that more than a million Californians can’t rely on clean water to drink or bathe in is a moral disgrace,” said Governor Newsom. “Parents shouldn’t have to worry about their kids drinking from the water fountain at school, and families shouldn’t have to dump water over their heads to shower every day. This funding is critically important to addressing California’s long-standing safe drinking water issues, and I would like to thank the Legislature for working collaboratively to pass this solution.”

In June, Governor Newsom signed the 2019-20 state budget, which provides \$130 million to begin implementation of a Safe and Affordable Drinking Water Program. SB 200 makes that money available for safe drinking water projects. SB 200 also requires the State Water Resources Control Board to develop a fund expenditure plan to identify failing water systems, as well as solutions to provide safe and affordable drinking water.

Governor Newsom today visited a small community neighborhood near Sanger, which struggles with safe drinking water issues. He spoke with families and members of the community that currently lack access to safe drinking water. Many of these families receive five 8-gallon jugs of water every two weeks through a grant program, which they use for drinking and cooking. When they run out, they risk using the water from their sink.

Additionally, SB 200 advances California's climate resiliency goals by helping to secure water resources statewide. Climate change adversely affects water availability and can affect drinking water quality. Rising temperatures can affect precipitation amounts and result in less reliable water supplies, which increase the need to use water supplies that contain contaminants and require treatment to meet drinking water standards. Disadvantaged communities are most impacted by climate change.

In February, Governor Newsom took several actions to bring safe drinking water to all Californians, including appropriating \$10 million for emergency drinking water projects and \$10 million to help bring local water districts into compliance with drinking water standards. He also directed drinking water funding for schools from the fiscal year 2018-19 budget to be given as grants to public agencies, public water systems or non-profit organizations to help with water management; and re-appropriated the balance of 2016 drinking water funds for schools.



Will California's New Water Fund Bring Safe Tap Water to Farm Country

In the state's rural agriculture belt, many communities of color can't drink the water in their homes. Fixing the problem may require more than money.



BY **NADRA NITTLE**

ENVIRONMENT, [Food Justice](#), [Rural America](#), [Water](#)

Posted on: July 29, 2019

Maria Olivera has lived in the rural community of Tooleville, in California's Central Valley, since 1974. During that time, she's not sure if the water in her home has ever been safe. For decades, she heard whispers about the nitrates and chemical pollutants, only to learn 15 years ago that the rumors were true. Now, like her neighbors, she uses bottled water to drink and cook with, but she still bathes in the water that comes from the faucet.

"Some people—they say they have rashes [from bathing with it]," said Olivera, a retired farmworker. "I haven't had any. But maybe in the future, I could get cancer."

According to the [California State Water Resources Control Board](#), more than 300 public water agencies in the state dispense contaminated drinking water, a public health crisis affecting about a million residents. The [agriculture industry](#) is a major contributor to this problem, with fertilizers and manure leading to nitrate contamination after they leach into the ground. [Nitrates are inorganic compounds](#) that occur both naturally and synthetically and have been linked to [cancer](#) and toxic algae blooms. They can be particularly dangerous for infants, causing "blue baby syndrome," a potentially deadly medical condition that prevents blood from carrying oxygen.

The frenzy of groundwater pumping that took place during the state's recent four-year drought also ramped up the amount of [arsenic in drinking water](#). Most of the residents affected by the

water crisis live in areas where there aren't enough customers to pay for the building and maintenance of water treatment facilities, which can total millions of dollars. Tooleville, for example, an unincorporated farmworker community about an hour southeast of Fresno, has a population of fewer than 400.

Advocates for these communities are counting on new legislation to change matters. [Senate Bill 200](#), which Governor Gavin Newsom's signed into law last week, establishes a Safe and Affordable Drinking Water Fund in the state treasury to enable water systems in California to provide "an adequate and affordable supply" of potable water to residents.

For the next decade, the state may spend up to \$130 million annually to ensure Californians in vulnerable districts have water. Rather than raise taxes to help communities in the Central Valley maintain and treat their water supply, the state will route money from both its Greenhouse Gas Reduction Fund (GGRF) and its General Fund to the State Water Resources Control Board to support the drinking-water fund.

"Safe drinking water is a basic human right," [California State Sen. Bill Monning](#) (D-Carmel) told Civil Eats. He introduced the legislation along with Assemblymembers [Eduardo Garcia](#) (D-Coachella) and [Richard Bloom](#) (D-Santa Monica). "SB 200 will help ensure that right becomes a reality through the establishment of a sustainable funding source that will help communities where the high cost of treating or providing clean drinking water is prohibitive for low-income residents."



A delivery of 5-gallon water jugs outside a Tooleville resident's home. (Photo courtesy of the Leadership Counsel)

Efforts to give all Californians access to clean drinking water will continue to face obstacles, including climate change and the historic racial and class divides that facilitated this public

health crisis. The new legislation also has a prominent opponent in State Senator Bob Wieckowski (D-Fremont). A frequent supporter of clean drinking water efforts, Wieckowski disapproves of SB 200 because most of the funds for the initiative will come from the GGRF.

“Californians should have *both* clean water and clean air,” he told Civil Eats. “Instead, we created a false dichotomy between the two.”

After waiting more than a decade than for clean water, Californians affected by the water crisis simply want to be able to drink from their tap, no matter the funding source. Although Olivera, 65, said that she’s in good health, her fears about the impacts of bathing in polluted water never vanish.

“It’s scary,” she said. “This is something serious.”

Why the Water Crisis Has Persisted

The water in East Orosi, California, is so bad that Felipe, a farmworker who recently discussed his struggle to access clean water during a tour hosted by the [Central California Environmental Justice Network](#), hasn’t used the fountain he installed in his own yard. So contaminated by nitrates, the water from the fountain turns green when exposed to sunshine.

“When I wash my car, if I don’t wipe it down, it turns white,” said Felipe (who did not provide his last name).

As a result of a state grant administered by community development organization [Self-Help Enterprises](#), East Orosi residents like Felipe receive five 5-gallon water jugs every two weeks. But the jugs aren’t always enough. Families who need more have to pay it for extra water themselves.

“It has been 15 years since we could use the water,” said Benedicto, another farmworker, who also did not provide his last name. “I installed a [home] filtration device, but it has been hard to maintain and expensive.”

Ryan Jenson, community water solutions manager at [Community Water Center](#), said that residents should not have to bear this burden. He expressed concern about the sustainability of these systems as well.

“It’s not always clear that such systems will solve the problem, given the level of contamination in some communities,” he said. “There’s no way to guarantee—aside from sending samples to a lab—that these filtration systems are working. In East Orosi, the water is contaminated with high levels of nitrates as well as 1,2,3-TCP(Trichloropropane). Both are tasteless and odorless, so home filtration systems might also give community members a false sense of safety.

Both Felipe and Benedicto hope that the Safe and Affordable Drinking Water Fund will result in the water system in East Orosi, which has a population of about 500, being consolidated with its neighbor Orosi, which serves potable water to nearly 8,800 people. A 2018 report by the U.C. Davis Center for Regional Change found that almost 80 percent of San Joaquin Valley communities without safe drinking water are about a mile away from communities that do have access to this resource.



A community organizing meeting in Tooleville. (Photo courtesy of the Leadership Counsel)

Over the years, efforts to get larger communities to merge or consolidate their water systems with smaller communities have failed, mainly because the members of the former fear they will have to cover the cost of improving water infrastructure for the latter. In some cases, residents from small, low-income communities simply cannot afford the higher water rates likely to come with consolidation. In particular, the communities of East Orosi and Orosi have yet to come to an agreement about how merging their water systems would work.

“I think consolidation can be a very smart solution, but there are also barriers that complicate consolidation,” said Pedro Hernández, a policy advocate for the Leadership Counsel for Justice and Accountability, an organization that serves California’s rural and low-income communities.

The fact that the state’s rural, impoverished communities of color are going without potable water isn’t a coincidence, Hernández said, but is instead the legacy of historic racism. In the first

half of the 20th century, restrictive covenants kept people of color out of more centralized and privileged communities and relegated them to the margins. Today, it is these “fringe” communities that lack clean water—despite their proximity to cities that do.

“This is environmental racism, environmental injustice,” said Susana de Anda, executive director and cofounder of Community Water Center. “This wouldn’t be happening in Hollywood.”

“There is no current funding for operation and maintenance [of many water systems],” she said. “The reality is that when you don’t have that, these systems are continually out of compliance. People are paying \$90 a month for water they can’t drink.

When the agricultural communities that have water sit just a mile or two away from cities that don’t, the class and racial divides that determine which Californians get access to natural resources become difficult to ignore.

“Tooleville has been waiting for 15 years to consolidate their water system,” Hernández said. “They’ve run into multiple obstacles and just outright resistance.”

The community of Matheny Tract, near Tulare, contended with a similar situation until 2016, when clean drinking water flowed from residents’ faucets for the first time since the drought dried up its water supply. The breakthrough came after years of legal wrangling with the city of Tulare, just two miles away, and California passed legislation such as Senate Bill 88, which urges larger municipalities to provide drinking water to smaller ones. The legislation authorizes the state to require cities to consolidate water systems, if necessary.

By providing funding for water maintenance and infrastructure, however, SB 200 gives small rural communities the support they need to repair their water supply without protracted negotiations with larger municipalities.



Tooleville residents advocating for water utility district consolidation at Exeter City Hall. (Photo courtesy of Leadership Counsel)

"This is why this bill is such a victory for the short term and the long term," de Anda said. "I've been working on this issue for over a decade, and this is our biggest success, and it's been driven by impacted residents. It's a huge victory to the folks impacted by this reality."

Funding Water Infrastructure

Although Wieckowski stands out as the sole legislator to have opposed SB 200, he calls it shameful that so many Californians lack access to clean drinking water. He pointed out that this public health crisis led the state to become the nation's first to enact a law identifying water as a human right. Signed by then-Governor Jerry Brown in 2012, the legislation states that "every human being has the right to safe, clean, affordable, and accessible water."

Wieckowski wants to make it clear that he doesn't object to helping communities in the state get access to clean water, but instead to the way the state has chosen to serve them. He says California has options other than taking money from the GGRF to address the water crisis.

"We need to continue consolidating small water districts to ... provide adequate treatment and delivery of safe drinking water," he said. "We also need to do a better job of instituting water conservation measures and replenishing our groundwater aquifers."

But Monning, the sponsor of SB 200, said that there is a clear overlap between climate change, sparked by greenhouse gas emissions, and the prevalence of unsafe contaminated water. He says this connection makes the GGRF a legitimate source of funding for the water crisis. Specifically, climate change "intensifies drought, reduces surface water flows, accelerates declining groundwater basins, and contributes to increasing concentrations of contaminants," Monning told Civil Eats. "Providing safe and affordable drinking water now will prepare communities to be resilient against the future impacts of climate change."



Governor Gavin Newsom (center) signs SB 200 at a home in the rural town of Tombstone in Fresno County with community residents, organizations, and State Senator Anna Caballero (left). (Photo courtesy of the Central California Environmental Justice Network).

Using money from the GGRF provides an immediate solution to the water crisis, which environmental justice advocates say should raise as much concern as the water crisis in Flint, Michigan, or the Dakota Access Pipeline. Monning said that the state is working to reduce carbon emissions, but the water crisis requires lawmakers to also “be mindful and attentive to the present-day victims of climate change.”

With one out of three water districts at risk of failing to provide clean water in the near future, Californians need short- and long-term solutions to the crisis now, environmental justice advocates argue. Pedro Hernández supports SB 200 because of its flexibility, he said. It not only offers support to cleanup nitrate contamination but also to individuals and small communities, including Native American reservations, struggling to access clean water.

“The need is still very great, and there has been no long-term sustainable solution,” he said. “I do feel this piece of legislation will take a significant step toward progress.”

De Anda calls the new law the “missing link” to curbing the water crisis in a changing climate. “We’ve been the canaries in the coalmine, but our people have been living in these communities for a long time, and we’re not going away.”

Twilight Greenaway contributed reporting to this story.

All photos courtesy of Leadership Counsel for Justice and Accountability.

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HYDROLOGY, CRYOSPHERE & EARTH SURFACE **Research Spotlight**

Restoring Natural Fire Regimes Can Yield More Water Downstream

Research in Yosemite National Park offers a new benchmark for understanding water balance changes in a mountainous basin 4 decades after its natural wildfire regime was reestablished.

By Terri Cook 22 July 2019

Mountain watersheds are crucial sources of fresh water across western North America, where the year-to-year availability of water depends in large part on variations in vegetation cover and climate. For much of the past century, fire suppression efforts in many areas have led to denser forests with growing water demands that have contributed to increased fire risk and water scarcity.

Researchers have previously hypothesized that reintroducing natural fire regimes to these landscapes—essentially letting natural patterns of lightning-ignited fires play out absent suppression efforts—should help mitigate water stress and decrease fire hazard, but in practice few studies have examined how restoring natural wildfire conditions affects a forest's long-term water balance.

Boisramé et al. have helped fill this knowledge gap by evaluating the effects of changing fire management on Yosemite National Park's Illilouette Creek Basin, a snowmelt-dominated catchment in California's Sierra Nevada. Following a century of suppressing fires in this basin, park managers enacted a new management policy in the early 1970s that allows most lightning-sparked fires to burn out naturally. Although researchers have observed that the ensuing fires have reduced the basin's forest cover by about 25%, few data are available to quantify corresponding changes in the catchment's water balance.

To address this deficiency, the researchers utilized the Regional Hydro-Ecological Simulation System (RHESSys) model to conduct two experiments: one that assesses the water balance changes that have occurred since wildfires were reintroduced to the Illilouette Basin and a second that evaluates how the catchment's water balance would have varied had its wildfires continued to be suppressed until 2017, the end of the study period. The results indicate that restoring a natural fire regime in the Illilouette Basin has reduced forest water stress and increased the availability of water downstream. The simulations suggest these water balance changes have been most pronounced during wet years and are due to small increases in snowpack and belowground water storage, coupled with reductions in evapotranspiration, that collectively resulted in earlier snowmelt runoff and a roughly 5% increase in annual streamflow.

The new study capitalized on the unique data set available from the Illilouette Basin, which is the only watershed in the U.S. West with a restored fire regime where enough hydrological data have been collected to allow model validation. The results demonstrate how large-scale forest restorations may affect water resources, a topic of considerable interest across much of the region. (*Water Resources Research*, <https://doi.org/10.1029/2018WR024098>, 2019)

IMPACT HUFFPOST

07/26/2019 05:45 am ET Updated 3 hours ago

Why This Community Is Fighting Wildfires By Setting Fire To Itself

Controlled burning makes the land more resilient to wildfire and brings neighbors in this California community together.

By Greta Moran

Last month, Dean Hunt set fire to his own land. He waited until the weather was just right — sunny, clear skies and relatively dry — for the fire to spread quickly, licking up the dense grasses blanketing the steep mountain. When the flames died down, they left a layer of ash.

This wasn't a case of reckless destruction; Hunt was trying to save his land.

Over the years, his ranch in Humboldt County, California, which has been in his family for four generations, has grown less pristine. Invasive grasses and conifers have encroached, taking over the space of the oaks and prairie and leading to a thick buildup of plants, making the land particularly vulnerable to wildfires.

In an effort to safeguard the land, Hunt, along with his Humboldt County neighbors, have turned to a practice called prescribed burning. The strategy — which has its roots in natural processes and indigenous practices — involves setting small, controlled fires that are just enough to burn the dense, smaller vegetation that can act like kindle for catastrophic wildfires.

Humboldt County has been lucky so far. California's northern stretch of redwood forest, lush mountains, and wide valleys has been mostly untouched by wildfires. But the warming planet has left the land hotter and drier than usual, turning it into the perfect kindling, and there's nothing to say a place like Humboldt — 70% forested — will remain free from disaster.

A year ago, the Mendocino Complex Fire erupted in the county bordering Humboldt to the south, quickly growing into the largest fire in California's modern history. A few months later, the Camp Fire flattened the town of Paradise, just over 200 miles from Eureka, the county seat of Humboldt.

"There was fire happening all around us," said Tracy Katelman, a community wildfire expert who lived in Humboldt County until February. This is particularly scary in a county with unreliable

cellphone service, old flammable houses, a lack of signs, and dirt roads leading to isolated homes — only one way in, one way out.

The scale of the wildfires ripping through the state, Katelman said, prompted her neighbors to start saying, “Holy shit, that could happen here ... how are we going to get ready for that?”

The answer they landed on is prescribed burning, both to make the land more resilient to fire and to bring the community together. It’s not a guarantee. It doesn’t end all fires, but it does mitigate the ever-growing potential for catastrophic ones.

“It’s a simple premise,” said Lenya Quinn-Davidson, a local resident and fire ecologist at the University of California Cooperative Extension. “Neighbors helping neighbors.”

In 2018, Quinn-Davidson, her colleague Jeffrey Stackhouse and their neighbors formed the Humboldt County Prescribed Burn Association, which now has 85 members. The first organization of its kind in the Western U.S., it pools together supplies (drip torches, weather monitors, fans to suppress the fire) and trains anyone interested in how to safely apply fire to the landscape in order to save it.



THOMAS STRATTON

Lenya Quinn-Davidson, co-founder of the Humboldt Prescribed Burn Association, on a burn last fall.

To date, they have burned a total of 1,022 acres on private land, which would have otherwise remained highly vulnerable to wildfire.

After a burning session, they often throw a potluck. “You have people from different parts of the community that would never be together — you have ranchers and then you have old hippies,” said Quinn-Davidson. “It’s just everyone working together and sharing experiences.”

Conducting a prescribed burn essentially comes down to understanding fire behavior, then controlling it. “There’s a real art,” said Quinn-Davidson. For instance, burning in lines running

parallel to the slope, Quinn-Davidson explained, causes the fire to burn less intensely, while burning in lines vertical to the slope, from the bottom-up, causes it to burn hot and fast.

Weather is also key. When burning grass, the weather needs to be dry and sunny — even a cloud blocking the sun might hinder the burn. Woodland oaks, on the other hand, burn best on the middle of winter, especially after a freeze that saps the moisture from the trees, explained Quinn-Davidson.



LENYA QUINN-DAVIDSON

Ranchers in Humboldt County are using prescribed fire to improve coastal rangeland.

Before starting a burn, the burn team will set a “control line,” typically consisting of bulldozed areas, roads, and existing trails, which mark the area and act as the boundary to the fire by giving it nothing to feed. Then they’ll do a “test burn” to see if the fire is behaving as they expect.

“Sometimes it’s not burning hot enough and we’ll decide to hold off until it’s drier,”

said Quinn-Davidson.

Throughout a burn, the team will work to both stoke and curb the fire. If the fire begins to peter out, they can apply more of the drip torch. Sometimes they’ll get “slop over,” fire that goes outside the control line. “You can easily put it out,” said Quinn-Davidson. Other times, an ember blows outside the boundaries and starts a small fire, known as a spot fire. “Again, that’s not a huge deal,” Quinn-Davidson said.

To date, the Humboldt County Prescribed Burn Association has never had a fire “escape” and have to call in additional resources to help put it out. That doesn’t mean it won’t happen.

“No amount of preparation will completely eliminate the element of risk of prescribed fire,” said Kurt McCray, chief of Humboldt-Del Norte Cal Fire Unit of the California Department of Forestry and Fire Protection. “But the benefits far outweigh the potential of losing control of the fire.”

These benefits are not only about wildfire resilience. By clearing out the more flammable, invasive vegetation, small, controlled fires can boost biodiversity. One study, conducted in the Sierra Nevada region of northern California, found that a decade after a prescribed burn, there were twice as many native plants as on non-burned land.



LENYA QUINN-DAVIDSON Jennifer Renner, local veterinarian and volunteer firefighter, on a PBA burn in late June 2019.

The idea of applying fire to Humboldt's landscape is not new. The Karuk, Hupa and Yurok tribes, whose indigenous land is partially in Humboldt, have conducted burns for millennia, helping the landscape adapt to fire.

They were forced to abandon this practice after the 1910 Great Fire, which burned 3 million acres across Idaho and Montana and killed 86 people. In the aftermath, the National Forest Service implemented fire suppression policies, which made controlled

fires illegal in public forests.

"Out of this wreckage came state-sponsored conservation, which seized on fire as the most visible and politically potent emblem of what was wrong," wrote environmental historian Stephen Pyne in a 2018 report on prescribed fire.

While the Forest Service's approach to fire softened in the late '60s, the legacy of this policy remains in the dangerous, dense buildup of vegetation in much of the country.

Some states, like Florida and Oklahoma, have incorporated prescribed burns into forest management since the rules were loosened, but the Western U.S. has lagged behind.

There is slow movement, though. In September, California passed a suite of bills promoting the use of prescribed burns on public and private lands. The legislation also supports the development of new, statewide certification for “burn bosses,” which would train fire professionals to lead prescribed burns.

“It’s a significant shift because the policy of the state for many years has been to just let the vegetation grow and controlled burns have been the disfavored approach,” said state Sen. Hannah-Beth Jackson (D), who drafted the legislation.



LENYA QUINN-DAVIDSON.

Members of the Briceland Volunteer Fire Department. Kai Ostrow, far left, was recently hired as a southern Humboldt liaison for the PBA.

Part of the reason prescribed burning has been overlooked is the false perception that it wouldn’t be suitable for California. “One of the main things I hear from folks is: ‘Well, that would work in

Texas. That would work in Oklahoma ... but that would never work in California,’” said Quinn-Davidson.

But many of California’s diverse landscapes have evolved with fire — and still require it today. “California is a fire-adapted state,” explained Quinn-Davidson. “The landscape needs fire to persist. The forests need fire. The woodlands need fire. The grasslands need fire.”

Support is growing, however. Fire safety councils, community-based organizations dedicated to fire preparation, are active across California, and prescribed burn associations like Humboldt County’s are quickly gaining momentum, with one in Plumas County and another in Sonoma County.

Humboldt is integrating prescribed burns into the county’s wildfire planning. In January, the county updated its Community Wildfire Protection Plan, which calls for scaling up prescribed burns: 5,000 acres on private land and 6,000 acres on public land every year.

As support has grown for prescribed burns, native tribes have been able to finally reclaim their practice. The Karuk Tribe in Humboldt County has established partnerships — with nonprofits as well as state and federal agencies — for larger-scale burns, said Bill Tripp, deputy director of cultural revitalization at the Karuk tribe's Department of Natural Resources.

Last June, the Karuk tribe burned 5,570 acres near Somes Bar, California — a pilot project conducted with the Forest Service, as [Wired reported](#).

“So many people — prescribed fire practitioners, fire ecologists, research managers and tribes — are all getting together and using all of their network connections to say, ‘Hey, we need to do this. This is our solution,’” said Tripp.

Prescribed burns work best when as many people as possible burn on their land, taking a small risk to build collective immunity for the entire region against wildfires. When proper safety precautions are taken, that risk is especially low.

“Fire is the most cost-effective and efficient force management tool we have,” said Cal Fire's McCray.

Of course, there's always a chance that something might go wrong, that an ember, picked by the wind, could spread faster than intended. But it's a flicker of risk compared to the risk of devastating wildfires the country is up against.

THIS JUST IN ... CalOES Submits Oroville Spillways Reimbursement Appeal on Behalf of DWR

July 22, 2019 Maven Breaking News



An aerial overview of the Lake Oroville construction site, main spillway, emergency spillway, and diversion pool in Butte County, California. Photo taken June 7, 2019.

Florence Low / California Department of Water Resources, FOR EDITORIAL USE ONLY

From the Department of Water Resources:



The Department of Water Resources (DWR) was notified today that the Governor's Office of Emergency Services (CalOES) submitted DWR's Oroville spillways reimbursement appeal to the Federal Emergency Management Agency (FEMA).

In March 2019, FEMA notified DWR that it does not consider some spillway reconstruction work to be eligible for reimbursement based on information DWR had previously submitted at the end of 2018. DWR has appealed this initial reimbursement determination and provided further information and updated cost estimates to support the department's appeal. To date, FEMA has approved reimbursement of \$337.4 million. For a copy of the appeal, contact DWR at erin.mellon@water.ca.gov.

In its appeal and cost submittals, DWR included updated reimbursement requests totaling an estimated \$1.11 billion to cover the costs of the Oroville spillways emergency response and emergency recovery efforts. This updated estimate is based on actual costs through Dec. 31, 2018 and anticipated costs for ongoing and future work to finalize the repairs. Final costs won't be known until all project work is complete. This overall cost estimate remains essentially unchanged from DWR's last update on costs in October 2018. Specific projects and costs may have been shifted to other categories, as noted in the explanations below.

Spillways Response and Recovery Project Categories	Estimated Cost
Emergency Response	\$194 million
Main Spillway Recovery	\$580 million
Emergency Spillway Recovery	\$291 million
Other Recovery Projects	\$43 million
Total Current Estimate	\$1.108 billion

- Emergency response activities includes erosion mitigation for both spillways during the incident, diversion pool sediment and debris removal, installation of temporary transmission lines, staff time, technical consultants and inter-agency support.
 - All work associated with removal of debris in the diversion pool has been moved to emergency response. Previous cost estimates included some debris removal in 'other recovery'.
- Main spillway recovery includes all work to remove and reconstruct the new main spillway, which includes all construction, engineering and technical consultant time, and all DWR staff and inter-agency support.
 - Some DWR staff and inter-agency costs were previously included in 'other recovery'.
- Emergency spillway recovery includes the construction of an underground concrete secant pile wall, a concrete splashpad (or apron), and a concrete buttress and cap to bolster the existing emergency spillway weir structure. This work includes all construction, engineering and technical consultant time, and all DWR staff and inter-agency support.

- Some DWR staff and inter-agency costs were previously included in 'other recovery'.
- Other recovery projects include installation of permanent powerlines, building on-site access roads, improvements to DWR-owned public roads, and repairs to the Feather River Fish hatchery, Thermalito Diversion Dam, feather river spawning beds, Spillway Boat Ramp parking lot, Oroville Dam toe drain, and the Oroville Wildlife Area.

Since the Oroville Spillways Emergency Recovery Project is ongoing, DWR will continue to update invoices or estimates of work for construction to FEMA until the full project is completed. Reimbursement costs may change slightly based on final invoices at the completion of the project.

FEMA's Public Assistance program reimburses applicants 75 percent of eligible costs associated with a federally declared disaster. The reimbursement determination from FEMA in March 2019 is based on its eligibility categories and policies. It is not a statement on the quality of the reconstruction work or whether the work was necessary. All costs not reimbursed by FEMA will be paid by beneficiaries of the State Water Project.

To view photos and video of the Oroville spillways construction, visit DWR's [Oroville spillway photo gallery](#) and [YouTube channel](#).

Oroville Mercury-Register

State appeals FEMA spillways reimbursement



Chairs and lunchboxes are seen on a leveling platform on the spillway during a tour of ongoing construction at the Lake Oroville Dam Spillway area Wednesday, July 11, 2018. (Bill Husa — Enterprise-Record)

By CHICO ER |

PUBLISHED: July 22, 2019 at 5:18 pm |

UPDATED: July 22, 2019 at 5:23 pm

SACRAMENTO — The California Department of Water Resources was notified today that the Governor's Office of Emergency Services submitted DWR's Oroville spillways reimbursement appeal to the Federal Emergency Management Agency.

Back in March, FEMA notified DWR that it does not consider some spillway reconstruction work to be eligible for reimbursement based on information DWR had previously submitted at the end of 2018. DWR appealed the initial reimbursement determination and provided FEMA with follow up information and updated cost estimates to support DWR's appeal, according to a DWR press release.

As of July 22, FEMA has approved a reimbursement of \$337.4 million. DWR says the cost of reconstruction and the emergency response is \$1.11 billion. The reconstruction of the main and emergency spillways alone has cost \$871 million so far, well above the \$275 million contract awarded to Keiwit Corp. of Nebraska.

In the appeal, DWR included updated reimbursement requests totaling an estimated \$1.11 billion to cover costs of the Oroville spillways emergency response and emergency recovery efforts. Final costs won't be known until all project work is complete, according to DWR officials.

The state says FEMA's Public Assistance program reimburses applicants 75 percent of eligible costs associated with a federally declared disaster.

COSMOS

THE SCIENCE OF EVERYTHING

NEWS EARTH SCIENCES 29 JULY 2019

To better manage groundwater, first understand it

Natalie Parletta talks to an Australian scientist about the dangers of over-exploiting an important resource.



Groundwater being pumped from the Great Artesian Basin, Australia, to produce hydro-electric power.
GETTY IMAGES

It may be out of sight, but it should not be out of mind. Water hidden beneath the earth's surface comprises 98% of the planet's fresh water. On average, this groundwater provides a third of all total water consumed, and its preciousness is ever more palpable since Cape Town's water crisis sends shock waves rippling around the world.

Despite this, its regulation is far from ideal – especially now that drought conditions are intensifying around the globe and people are increasingly drilling downwards.

Before we even start to improve groundwater management, we must better understand and measure it, says international groundwater expert Craig Simmons, from Flinders University in Adelaide, Australia.

“A lot of the problems that we have in groundwater are because we don't have even the basic understanding on some of these systems,” he says.

Many subterranean aquifers have been around for centuries or even hundreds of millennia, nurturing trees and vegetation, permeating spaces and crevices in dirt, sand and rock and networking with rivers, streams, lakes and everglades.

Farmers use bores to draw water up from artesian basins and windmills generate energy to pump it from underground aquifers. Groundwater is used to wet vast swathes of agricultural land. Many cities source it for irrigation and industrial processes that might be less obvious, like beer and soft drink production. Other activities that draw on groundwater include mining and coal seam gas extraction.

Above all, it is an important source of drinking water, supplying half the world's needs overall. In the U.S., half of city populations and virtually all rural people rely on it. Some Australian cities depend increasingly on it as surface water sources dwindle.

But groundwater is not an infinite resource; it's like drawing money from the bank without replenishing it, Simmons says.

Over-exploitation can lead to a litany of problems.

Extracting groundwater causes drawdown. This can impact delicate ecosystems and biodiversity. For instance, groundwater feeds vegetation and replenishes intermittent streams that communities of fish and aquatic invertebrates depend on. Wet streambeds are also important sites of microorganism activity, carbon and nutrient recycling.

Some areas may house species that live there exclusively. In the Great Artesian Basin, Australia's biggest groundwater basin, for instance, 98 endemic species of flora and fauna have been identified, and these are at risk from drawdown.

Subsidence is another problem that occurs when the ground level sinks from over-pumping and resulting depressurization.

"The land just compacts because there's reduced pressure," Simmons explains. "It's like taking air out of a tire; it just starts to collapse under the weight of the rock and soil." The most extreme example of this is in San Joaquin Valley, California, where the ground level has sunk by more than eight meters since the 1920s – that's nearly the height of a telegraph pole.

Seawater intrusion is another issue. It occurs naturally along the coastline but can be aggravated by extracting groundwater from nearby aquifers. This is a major problem in regions like Australia with high coastal populations. If the seawater seeps inland it can contaminate bores with salty water, wasting money and taking centuries to remedy. Excess pumping can also draw salt in by drilling deeper into the earth.

"So water quantity and water quality are often connected issues," says Simmons.

Groundwater can be contaminated by other pollutants such as gasoline, oil, chemicals, pesticides and fertilizers. Toxic substances from mining sites, landfill, hazardous waste sites and untreated septic tanks can also make their way into it.

Simmons' research focus is complex groundwater modeling, which he says is a fundamental tool. "It's like being able to predict the weather tomorrow," he explains.

Current groundwater modeling has a huge error margin. "It's kind of like saying the weather tomorrow will be anything between 12 degrees and 43," he laughs. "That's kind of not very helpful."

One aspect of groundwater his team is trying to understand is aquifer recharge rates, which Simmons says is a vital area of management; finding better ways to estimate “how much money’s topping up your bank account, not just how much you’re spending”.

They have also worked on improved comprehension of groundwater’s connection to surface water. This is critical because water allowances could double up if they are managed separately – extracted groundwater might be pulling from a nearby river, for instance.

One of Simmons’ latest projects will model the impact of faults and barriers on the flow of groundwater and solutes at mine sites.

“By combining geological, hydraulic and geochemical approaches with 3D numerical models, we will gain an improved understanding of the role of faults and barriers in subsurface hydrology, and an improved ability to model complex groundwater systems,” he explains.

Ultimately, the world’s water problems will need a combination of solutions to better understand and manage water and tighten up on water use and efficiency, factoring in all water sources.

“It’s about how do you get the right mix of water supplies for drinking water, whether it’s surface water, dams, rivers, reservoirs, groundwater,” Simmons says. “That optimal mix is a critical issue that we often don’t understand – and desal is a part of that too.”

As well as modeling the supply side, it’s important to understand the impact of human activities, such as mining, agriculture, coal seam and shale gas extraction, on groundwater and ecosystems. Simmons’ team is developing software models to predict those processes and impacts as well, to better inform environmental impact statements.

In that sense, accurate modelling will be like a guide dog for the blind, and hopefully give more credibility to widespread concerns about large industries sourcing groundwater haphazardly.

“It’s about looking at the use of water and what the impacts of that use are environmentally,” says Simmons. “And it’s always going to be a social, economic and environmental triple bottom line.”

This article was originally published on Forbes.

New CWEA Certification Website Highlights Pathways into Water Careers

By Alec Mackie · July 28, 2019 · Views: 107

The California water profession is an exciting and growing sector. From droughts to floods to water reuse – California is a world leader in water strategy and technology. The sector is experiencing a large workforce turnover as approximately one-half of California water professionals retire and new people join us.

Water professionals are responsible for safe drinking water and environmental protection. They have critical responsibilities for public health and the well-being of our communities. Workers are required or encouraged to obtain a professional certification.

CWEA offers six voluntary certifications. We're proud to launch a new website to explain the benefits of CWEA certification, the importance of ethics and to help candidates navigate the application process. We know certifications are important – they get help you get your first water job or get ready for a promotion.

The new website is Cert.CWEA.org

The website explains each step needed to obtain certification, including: selecting a certification; applying; computerized testing centers; continuing education and renewals.

“The new website is a great tool for anyone interested in certification,” said **Norah Duffy**, CWEA’s Director of Certification. “It will make navigating the process easier, and the Cert Team is here to help as well – we want people to be successful.”

CWEA Technical Certifications

1. [Collection System Maintenance](#)
2. [Electrical/Instrumentation Technician](#)
3. [Environmental Compliance Inspector](#)
4. [Laboratory Analyst](#)
5. [Mechanical Technologist](#)
6. [Advanced Water Treatment Operator](#) (a joint program with CA-NV AWWA)

The new certification website was built with guidance from the Technical Certification Program Committee, an all-volunteers group of water professionals that oversee and guide CWEA’s certification program. Financial support this year for the website comes from [Haaker Equipment Company](#).

“We recognize how hard collection system professionals work day in and day out to keep our systems operational, and we want to support them in any way we are able to. After all, people are the greatest asset to any organization and should be the priority! ” said **Robin Haaker**, President & CEO.

Certifications are documented evidence of professional achievement. They lead to greater recognition and respect for the knowledge and abilities of water professionals. The State Water Board, CWEA and CA-NV AWWA all issue various certifications for each of the water practice areas.

Learn more about CWEA certifications at Cert.CWEA.org. Start down your own pathway to a great water career!

About CWEA

Founded in 1928, CWEA is an association of over 10,000 California water professionals. Led by an all-volunteer Board of Directors, CWEA educates and certifies water quality professionals, disseminates technical information, and advocates for the water profession. CWEA is a proud member association of the Water Environment Federation and we are a nonprofit 501(c)3 organization. Contact info: www.CWEA.org or 510.382.7800. CWEA together with our sister CA water associations also highlight water careers on the public outreach website www.CAWaterJobs.org.

Sacramento Bee
CAPITOL ALERT

Water systems must notify Californians about these cancer-linked chemicals under new law

BY SOPHIA BOLLAG AND

AUGUST 01, 2019 05:30 AM, UPDATED 1 HOUR AGO

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been linked to birth defects and cancers. BY MAUREEN CHOWDHURY

Starting next year, California water systems must notify residents if their water sources contain potentially toxic levels of cancer-linked chemicals called PFAS under a law Gov. Gavin Newsom signed Wednesday.

The new law, [AB 756](#), will also expand state regulators' ability to test for per-and polyfluoroalkyl substances, known as PFAS. The compounds can be found in everyday plastics and products like floss and are concentrated in firefighting foam that the military and commercial aviation industry has used for decades.

That foam has seeped into groundwater and wells surrounding military installations and commercial airports, and has been found in drinking water sources at more than 712 locations in 49 states, according to the Environmental Working Group, a nonprofit organization.

The Environmental Protection Agency has said the compounds have been linked to [cancers and birth defects](#).

California regulators have already begun testing some water sources for the chemicals, said Assemblywoman Cristina Garcia, the Bell Gardens Democrat who authored the bill.

"This bill will help find out the scope of the problem so remediation can begin," she told her Assembly colleagues before they voted unanimously to advance the bill.

Last year the Pentagon published a list of hundreds of contaminated private and public water sources on military bases and in the communities surrounding those installations. Congress held its first hearing on the impact of PFAS on communities and has funded a nationwide study to assess the long-term health impacts of PFAS exposure on about 10 military communities.

The Air Force swapped the old PFAS-concentrated foam for a new firefighting foam at all of its installations in 2018, but some PFAS foam is still kept on hand for emergencies or to respond to hazardous material. The Navy also continues to use the PFAS firefighting foam on its ships.

California's new law will take effect next year.

CORRESPONDENCE

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



July 23, 2019

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

Subject: Validated Water Loss Audit Report for Data Year 2017

Dear John Friedenbach,

Thank you for submitting Humboldt Bay Municipal Water District's 2017 Validated Water Loss Audit Report. The Department of Water Resources has reviewed your report and found it addresses the requirements of Chapter 7, Division 2, of Title 23 on Water Loss Audits and Water Loss Control Reporting. The validated water loss audit reports are posted at our website: <https://wuedata.water.ca.gov>.

If you have any questions regarding water loss audits and reports, please contact me at Todd.Thompson@water.ca.gov or at (916) 651-9255.

Sincerely,

A handwritten signature in blue ink that reads "Todd Thompson".

Todd Thompson
Senior Engineer
Urban Water Use Efficiency
(916) 651-9255

Electronic cc:

Samantha Ryan, Program & Regulatory Analyst
Mary Lou Cotton, Kennedy/Jenks Consultants



HUMBOLDT BAY MUNICIPAL WATER DISTRICT

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July 23, 2019

Board of Supervisors

825 5th Street

Eureka, CA 95501

RE: Water Infrastructure on Samoa Peninsula

Dear Supervisors,

As you may be aware the Humboldt Bay Municipal Water District was formed in the 1950's to attract industry and supply water (untreated surface water) from the Mad River to two pulp mills which were located on the Samoa Peninsula. Our District entered into contracts with the two pulp mills to provide up to 65 MGD (million gallons per day) of untreated water from the Mad River. Both pulp mills constructed and maintained on-site clarifiers to remove/reduce the turbidity from the industrial water prior to utilizing it in their pulp making process. As you also know, the first pulp mill ceased operation in the mid 1990's and the second in 2009.

Since that time, our District, through its public engagement process which we call our Water Resource Planning effort, has been seeking alternate beneficial uses of our excess water. The three focus areas as determined by that public process are: 1) Local Sales; 2) Instream Flow; and 3) Transport. Our Board has allocated 20 MGD to Local Sales; 20 MGD to Instream Flow; and 35 MGD to Transport.

In regards to your discussion today regarding water infrastructure on the Samoa Peninsula, as mentioned above, our industrial system remains operational but has received minimal maintenance during the past 10 years. Consequently, it will need significant capital improvements to once again provide a reliable industrial water supply 24/7/365. In addition, the issue of rehabilitating the existing clarifiers on the peninsula or siting and constructing a new clarifier needs to be addressed. Our District is willing to collaborate with the County, the Humboldt Bay Harbor District, Nordic or others to seek State or Federal grant funding to address these water infrastructure capital needs which will ultimately benefit our local economy.

We are available to discuss this further with you and your staff.

Regards,


John Friedenbach
General Manager

CONTINUING BUSINESS

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

To: Board of Directors

From: John Friedenbach

Date: August 2, 2019

Subject: Water Resource Planning (WRP) – Status Report

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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

Staff met again with Nordic Aquafarms and has been providing water quality data for their due diligence process. Nordic has requested that we obtain formal quotations for the replacement components contained in our internal analysis of industrial system rejuvenation. The County Board of Supervisors has directed their Economic Development Department to work with our District to seek potential grant funding or financing options for the necessary Industrial System capital upgrades required by the District. A progress report is due back to the Supervisors by September 10th. An update to the West Yost Opinion of Probable cost study was obtained. See attached document. The initial draft of this study was shared with Nordic. They have suggested possible alternative technology for turbidity reduction. District staff is coordinating with Nordic on exploring available technologies.

No update from Enviva.

b) Transport

No update.

c) Instream Flow Dedication

Progress continues with the tasks contained in our WCB instream flow grant. Our next meeting is scheduled for August 6th. Staff will provide a verbal report of the results from that meeting.

TECHNICAL MEMORANDUM

DATE: August 2, 2019 Project No.: 879-50-19-01
SENT VIA: EMAIL

TO: John Friedenbach, General Manager
Humboldt Bay Municipal Water District

CC: Dale Davidsen, Water Superintendent
Humboldt Bay Municipal Water District

FROM: Aileen Kondo, PE, RCE #74367

REVIEWED BY: Craig Thompson, PE, RCE #44224, BCEE #10-20029,

SUBJECT: Mad River Clarification Treatment Facility – Conceptual Level Study

BACKGROUND

The Humboldt Bay Municipal Water District (District) owns and formerly operated Pump Station No. 6, which includes a river diversion structure and six pumps. The pump station supplied Mad River water to two pulp mills located on the Samoa Peninsula. The two pulp mills ceased operating in the late 1990s or early 2000s, and the District's 50 to 60 million gallon per day (mgd) Mad River water (rights) supply has remained underused. The water supply is available for use by new customers.

The Humboldt Bay Harbor District is negotiating sale or lease of portions of the former Louisiana Pacific (LP) pulp mill site to Nordic Aquafarms (Nordic) for fish farming operations. Information provided by Nordic in its February 20th, 2019 memorandum (Attachment A) indicate that the water delivered to and used in its fish farms must satisfy several important water quality criteria. The District recognizes that its Mad River water supply will not satisfy some of Nordic's water quality requirements all of the time and will require treatment. The District is interested in knowing what treatment will be required, as well as the cost and land area requirements for a facility to treat Mad River water for supply to Nordic.

The District has contracted with West Yost Associates (West Yost) for engineering services to develop a conceptual level opinion of probable project cost (OPPC) and site layout for the required industrial water treatment facility (IWTF). This technical memorandum (TM) describes the proposed treatment process, including treatment of waste sludge solids generated by the water treatment process, to meet Nordic's water quality objectives. The TM summarizes the OPPC for the initial phase of the facility and includes a site layout for the anticipated built-out facility that includes sludge drying beds.

The District requested that an additional evaluation be performed that includes replacing the sludge drying beds included in our original evaluation with a mechanical dewatering system and that

would also include both delivering electrical service to the site and using the two megawatt (2-MW) electrical engine-generator unit located at its Essex Control Center as a source of stand-by power for the new Mad River Treatment Facility.

WATER QUALITY AND DESIGN OBJECTIVES

Design Flow Rates

The IWTF will need to provide a reliable water treatment capacity of 4 mgd in the initial phase (Phase 1) that is currently anticipated to be operational in September 2023. The IWTF will increase in capacity to 8 mgd in Phase 2 within 2 to 4 years after the Phase 1 facility is operational. The facility will expand to an ultimate treatment capacity of 35 mgd in Phase 3. Due to the critical nature of this water treatment facility, one redundant treatment train will be necessary in all phases.

Table 1 summarizes the proposed treatment facilities' capacities for the IWTF initial, second, and ultimate expansion phases. The proposed design capacities are slightly higher than Nordic's required capacities to allow for treatment trains with identical capacities, as they should be easier to design, construct, and operate. Each phase includes one redundant treatment train for reliability.

Phase	Treatment Train	Total Capacity, mgd	Firm Capacity, mgd
1	Install two (2) x 4.5 mgd Trains	9	4.5
2	Add one (1) x 9 mgd Train	18	9
3	Add three (3) x 9 mgd Trains	45	36

Water Quality Objectives

Table 2 provides a comparison of the Mad River water quality and Nordic's target water quality requirements for fish farming operations. The IWTF's main treatment objective will be to reduce the turbidity (suspended and settleable solids) in the Mad River water supplied to Nordic to between 5 and 10 nephelometric turbidity units (NTU), especially during and after storm events. It is assumed that Nordic will provide additional treatment as-needed to satisfy its other water quality targets (e.g., pH, conductivity, temperature).

Table 2. Mad River Water Quality Compared to Nordic Target Water Quality

Parameter	Mad River Water Quality	Nordic Target Water Quality
Alkalinity, milligrams per liter (mg/L) CaCO ₃	61 ^(a)	>45
pH	7.3 to 8.3 ^(b)	6.8 to 7.4
Total Suspended Solids (TSS), mg/L	18 to 330 ^(c)	as low as possible
Turbidity, NTU	1 to 6,530 ^(d)	as low as possible
Conductivity, millisiemens per meter (mS/m)	15 ^(a)	4 to 5
Temperature, °C	15 to 21 ^(b)	<13
Notes:		
(a) Based on lab analysis of one grab sample collected on May 8, 2019.		
(b) Based on field analysis of five grab samples collected between May 24, 2019 and June 3, 2019.		
(c) Based on lab analysis of six grab samples collected on May 22, 2019 and June 3, 2019, during and after a storm event. The analysis used Standard Method SM 2540D, 1997. Revs 2011, which only captured the non-filterable residue and did not include all solids in the sample.		
(d) Based on daily recorded turbidity from January 1, 2000 through December 31, 2018. The average value of the daily turbidity data was 28 NTU, the 50 th percentile turbidity value is 2 NTU, and the 90 th percentile turbidity value is 62 NTU.		

Solids Production

Treatment of Mad River water to reduce turbidity will produce waste solids. Contributors to solids production include the solids in the Mad River water supply (measured as TSS) and solids from chemicals added (i.e., coagulant and coagulant-aid polymer) to condition the suspended solids in the Mad River for removal. The pounds of dry solids that would be produced were estimated using the District's available Mad River source water turbidity values and applying the following assumptions:

- The ratio of suspended solids (in mg/L) to turbidity (in NTU) is 1.5 mg/L per 1 NTU.
- Aluminum sulfate (alum) will be used for coagulation.
- The coagulant (alum) dose will vary between 10 and 100 mg/L, based on the source water turbidity; the coagulant dose will not exceed 100 mg/L regardless of the source water turbidity.
- Coagulant-aid polymer will be added at a ratio of 0.05 mg/L polymer to 1 mg/L coagulant.

The District collected grab samples from the Mad River following a storm event that increased turbidity levels in the river. Multiple samples were collected as the turbidity declined from over 350 NTU down to less than 30 NTU. The District measured the turbidity in the samples and sent the samples to a lab for TSS analysis. A correlation between the TSS and turbidity was developed from the data; generally, the ratio of TSS to turbidity was 0.9 mg/L per 1 NTU. The requested lab analysis was for a standard method that captures only the non-filterable residue and not all the solids in the sample. A more conservative TSS to turbidity ratio of 1.5 mg/L per 1 NTU was used in the solids production calculations.

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 August 2, 2019
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The District performed jar tests to test a range of coagulant dosages for treating different levels of source water turbidities. The protocol used to perform the jar tests, as well as the jar test results, are included in Attachment B. Approximate optimal coagulant dosages were identified for the source water turbidity levels tested, and a correlation between coagulant dose and turbidity was developed. The correlation was used to estimate the coagulant dose based on the source water turbidity.

Annual amounts of dry solids production were computed at IWTF flow rates of 4.5 mgd, 9 mgd, and 36 mgd, using the historical daily turbidity data from January 2000 through December 2018. Table 3 lists the minimum, average, maximum, and 90th percentile annual dry solids production at these IWTF flow rates. The maximum values are within range of the 90th percentile values, which indicates that the maximum values are not outlying values. The maximum annual dry solids production values were used to size the solids handling facilities.

Table 3. Annual Solids Production Based on 2000 through 2018 Daily Turbidity Data				
Plant Flow Rate, mgd	Annual Dry Solids Production, tons			
	Minimum	Average	Maximum	90 th Percentile
4.5	77	313	565	495
9	153	626	1,129	990
36	611	2,503	4,516	3,960

WATER TREATMENT PROCESS

Clarification

Coagulation/Flocculation/Sedimentation

A “conventional pretreatment” clarification treatment process of coagulation, flocculation, and sedimentation is proposed for reducing suspended solids and turbidity in the Mad River water. The Mad River is subject to high turbidity events, with turbidity spikes over 1,000 NTU. Direct (granular media or membrane) filtration is not suitable for treating high turbidity waters, due to its susceptibility to clogging. The conventional clarification process, which uses gravity settling, is better suited for treating high turbidity waters and can typically reduce turbidity levels down to Nordic’s desired 5 to 10 NTU water supply range.

The conventional clarification process involves adding chemicals (a coagulant and potentially a polymer) to facilitate particle agglomeration for settling. A metal-salt coagulant (likely alum or ferric chloride) would be added at the rapid mixer to coagulate (neutralize the charge of) particles in the water, so that the particles can agglomerate (more readily bind together) to form settleable floc particles. A coagulant-aid polymer may be added at the rapid mixer or in one of the flocculation chambers to enhance bridging the smaller flocs and facilitate formation of larger, more settleable flocs.

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The clarification treatment process would include the following components:

- Inline rapid mixers (one duty unit plus one standby unit).
- At least two treatment trains that provide the ability to deliver the required flow rate (4.5 mgd, 9 mgd, or 36 mgd) when one treatment train is off-line for routine or non-routine maintenance tasks. This will provide the required firm capacity and redundancy required. Each treatment train would include:
 - A flocculation train with three stages (chambers) and a vertical turbine flocculator in each stage with a variable speed motor to provide tapered mixing energy.
 - A sedimentation basin with launders to collect the clarified water and a sludge scraper mechanism to move the settled solids out of the basin.

Table 4 summarizes the clarification treatment process preliminary design criteria.

Table 4. Clarification Treatment Process Preliminary Design Criteria

Parameter	Units	Initial Phase	Phase 2	Phase 3
Plant Design Flow Rate	mgd	4.5	9	36
Plant Total Capacity	mgd	9	18	45
Plant Firm Capacity	mgd	4.5	9	36
Rapid Mixer				
Process Units	no.	2 (1 + 1)	2 (1 + 1)	2 (1 + 1)
Type	--	Inline	Inline	Inline
Pipe Size	inches	24	24	48
Mixing Intensity	sec ⁻¹	800 to 1000	800 to 1000	800 to 1000
Flocculation Basin				
No. of Trains @ Capacity, per Train	no. @ mgd	2 @ 4.5	2 @ 4.5 & 1 @ 9	2 @ 4.5 & 4 @ 9
Overall Inside Dimensions, per Train (L x W x SWD)	ft x ft x ft	48 x 16 x 15	48 x 32 x 15	48 x 32 x 15
Floc Time	minutes	27.6	27.6	27.6
No. of Stages	no.	3	3	3
No. of Flocculators, per Train	no.	3	6	6
No. of Flocculators, Total	no.	6	12	30
Velocity Gradient, per Stage	sec ⁻¹	80, 40, 20	80, 40, 20	80, 40, 20
Sedimentation Basin				
No. of Basins @ Capacity, per Basin	no. @ mgd	2 at 4.5	2 at 4.5 & 1 at 9	2 at 4.5 & 4 at 9
Overall Inside Dimensions, per Train (L x W x SWD)	ft x ft x ft	107 x 16 x 16.25	107 x 33.5 x 16.25	107 x 33.5 x 16.25
Detention Time	hours	1.1	1.2	1.2
Surface Area with Tube Settlers, per Train	sq. ft	1,280	2,680	2,680
Surface Loading Rate	gpm/sf	2.4	2.3	2.3
No. of Launderers per Basin	no.	2	4	4
Launder Weir Overflow Rate	gpd/LF	14,063	14,063	14,063
Abbreviations:				
ft = feet		no. = number		
gpd/LF = gallons per day per linear feet		sec = seconds		
gpm/sf = gallons per minute per square feet		sq. ft = square feet		
L = length		SWD = side water depth		
mgd = million gallons per day		W = width		

Grit Removal

The Mad River water may contain a significant amount of settleable solids (in addition to suspended solids), especially during high flow rate events. These solids can settle readily and may settle out and accumulate in the flocculation chambers and in the sedimentation basins. The proposed sedimentation basins include sludge collection systems to permit removing most of the settled solids from the basin, but the settled solids may be abrasive and shorten the sludge collection equipment service life.

A grit removal system could be installed ahead of the coagulation/flocculation/sedimentation treatment trains to remove the larger settleable solids in the water, to reduce the frequency of basin cleaning events and reduce potential wear on the sedimentation basin sludge collection equipment. It is assumed that the IWWTF will not include a grit removal system as part of the initial phase; but depending on District operating experience, a grit removal system could be installed as part of the Phase 2 expansion or Phase 3 expansion project. The grit removal system would not require redundancy, as it is not critical to the treatment process.

Solids Handling

Mechanical Dewatering

Mechanical dewatering units, such as centrifuges, belt presses, or screw presses, are recommended for the estimated amount of solids that would be handled. Mechanical dewatering units require significantly less space to process the large volume of solids that would be produced especially when clarifying 36 mgd of the Mad River water. The components of the mechanical dewatering system include the following:

- Gravity thickeners to thicken the sludge solids from the sedimentation basins.
- A thickened sludge holding tank and mixer to maintain a homogenous slurry that would be fed to the mechanical dewatering system.
- Mechanical dewatering equipment to de-water the wet sludge solids.
- Pumps to transfer the thickened sludge from the gravity thickeners to the sludge holding tank and a separate set of pumps to feed the homogenous sludge slurry to the centrifuge or other mechanical dewatering equipment.
- Mechanical sludge conveyors to transfer the dry sludge solids (20 to 25 percent dry solids) to a dumpster bin.
- Dumpster bins to contain the dewatered solids prior to hauling to a landfill.
- A sump and pumps to collect the concentrate from the mechanical dewatering equipment for return to the head of the clarification treatment process.
- A mechanical dewatering building to house the mechanical dewatering equipment, conveyors, dewatering system chemical storage and metering pumps, and dumpster bins.

The space requirement for a 2,500 square foot building to house the mechanical dewatering facilities and the associated pump stations and sludge flow equalization, storage and mixing tank is less than a single 275-foot by 70-foot sand drying bed

The District would need to review with Nordic the types of polymers used with mechanical dewatering system and the amount of polymer that can be present in the concentrate before converting from sand drying beds to mechanical dewatering equipment for solids handling. Additionally, installation of a grit removal system should be considered to reduce the potential for abrasive damage to the mechanical dewatering equipment.

Table 5. Mechanical Dewatering Preliminary Design Criteria

Parameter	Units	Initial Phase	Phase 2
Plant Design Flow Rate	mgd	4.5	9
Annual Solids Production	lbs	1,128,900	2,257,700
Solids Loading Rate (Annual)	lbs/sf	20	20
Dewatering Building Footprint	sq. ft	2,500	2,500
No. of Mechanical Dewatering Units	no.	1	2
No. of Sludge EQ Tanks	no.	2	2
Volume of Sludge EQ Tanks	gal	60,000	60,000
Sludge Feed Pump Flowrate	gpm	100	100

TREATED WATER STORAGE AND PUMPING

A clarified water storage tank would provide water flow rate buffering capacity to allow operation of the IWTF at a relatively constant flow rate independent of fluctuating water demands. The tank would receive clarified water when the customer's water demands are lower than the current water clarification production rate. The customer's water demands can be supplied in part or fully from the water storage tank when the water demands are higher than the water production or if the IWTF needs to be shut down for a short period. A 2 million gallon (MG) tank was assumed for all three phases of the IWTF project.

A treated water pump station will be needed to deliver the clarified water from the treatment units into the water storage tank and/or the water distribution pipeline to the customer(s). The pump station suction piping would be configured to receive clarified water from both the treatment units and the water storage tank. The pump station discharge piping would be configured to allow delivering clarified water directly into the clarified water distribution system, into the water storage tank, or to both the 2 MG tank and the customers. Control valves with motor-actuators would be used to automate both the clarified water pump station and tank operations.

Table 7 summarizes the preliminary design criteria for the treated water storage tank and pump station. Since the location of the IWTF has not been determined, the treated water pumps' total dynamic head is estimated to be about 40-feet.

Table 6. Treated Water Storage Tank and Pump Station Preliminary Design Criteria				
Parameter	Units	Initial Phase	Phase 2	Phase 3
Water Storage Tank				
Type	–	Welded Steel		
Volume	MG	2.0		
Tank Diameter	feet	100		
Water Depth	feet	34		
Freeboard	feet	5		
Tank Height	feet	39		
Treated Water Pump Station				
Type	–	Vertical Turbine	Vertical Turbine	Vertical Turbine
Number of Pumps @ Flow Capacity per Pump	no. @ mgd	2 @ 5	2 @ 5 1 @ 10	2 @ 7.5 3 @ 10
Total Dynamic Head	ft	40	40	40
Speed Control	–	Variable Speed	Variable Speed	Variable Speed
Motor Size	HP	50	50 & 100	75 & 100

CONCEPTUAL SITE LAYOUT

In addition to the treatment process units and the water storage and pump station described in the sections above, the IWTF would have a small operations building and chemical storage building. The operations building would include office space for a computer-based control station, lab space, an electrical room, toilet and shower facilities, and a mechanical/maintenance room (for the chemical metering pumps and general maintenance tasks use). The chemical storage area would be adjacent to the operations building and would include chemical spill containment walls and a canopy cover.

Figure 1 and Figure 2, included at the end of this TM, show two optional site layouts. The layouts show the facilities that would be added at each phase. The total land area required for buildout of the Phase 3 facility with 36 mgd capacity is about 8.25 acres.

The required land area for the built-out facility could be reduced to 5.5 acres if mechanical dewatering were implemented in Phase 2 in lieu of constructing three additional sand drying beds. If mechanical dewatering were implemented in the initial phase and no sand drying beds were constructed, the required land area for the built-out facility would be about 3.75 acres.

CONCEPTUAL OPINION OF PROBABLE PROJECT COST (OPPC)

An engineer's OPPC was developed for the initial phase (4.5 mgd) of the IWTF. The Association for the Advancement of Cost Engineering (AACE) International publishes guidelines for classes of cost estimates and their expected accuracy ranges. Based on these guidelines, the preliminary OPPC summarized below is a Class 5 Estimate. Class 5 estimates are based on limited information and are generally prepared for strategic planning purposes, assessment of initial viability,

evaluation of alternate schemes, and project screening. Typical accuracy ranges for Class 5 estimates are (-)20 to (-)50 percent on the low side and (+)30 to (+)50 percent on the high side.

The total project cost is estimated to be \$40,760,000 and could range between \$26,490,000 and \$57,060,000. The total project cost of the treatment portion of the facility is about \$24.2 million, and inclusion of a 2-MG treated water storage tank and a nominal 4.5-mgd capacity (expandable to 35 mgd) treated water pump station adds about \$13.5 million to the OPCC.

The OPPC was developed using budgetary quotes from vendors, cost data from similar projects, and R.S. Means Data Online. The cost estimate summarized in Table 8 below applies the following contingencies and markups:

- 8.5 percent sales taxes on materials (applicable in both Eureka and Arcata, California)
- 25 percent indirect project cost (general conditions, contractor overhead and profit, bonds, insurance, mobilization and demobilization)
- 40 percent for conceptual-level estimating contingency
- 2.5 percent inflation rate to midpoint of construction; assumes 42 months to midpoint of construction (January 2023)
- 25 percent for project costs (planning, permitting, design, construction management, engineering services during construction, and administrative and legal costs)

Table 7. Conceptual Level OPPC for the IWTF 4.5 mgd Initial Phase	
Element	Element Cost, dollars
Site Work and Yard Piping	2,700,000
Clarification Treatment System	2,840,000
Mechanical Dewatering System	2,590,000
Operations Building and Chemical Storage	1,360,000
Water Storage Tank (2 MG)	2,350,000
Treated Water Pump Station	1,040,000
Directional Drilling	280,000
Electrical & Instrumentation	3,050,000
Subtotal Project Cost	\$16,210,000
Taxes on Materials (8.5%)	\$890,000
Subtotal	\$17,100,000
General Conditions, Overhead & Profit (25%)	\$4,280,000
Subtotal	\$21,380,000
Estimating Contingency (40%)	\$8,550,000
Current Construction Cost	\$29,930,000
Inflation to Construction Midpoint (2.5%)	\$2,680,000
Opinion of Probable Construction Cost	\$32,610,000
Planning, Design, Construction Management, Engineering Services during Construction, District Project Administration and Legal Costs (25%)	\$8,150,000
Opinion of Probable Project Cost	\$40,760,000
Opinion of Probable Project Cost Range	\$26,490,000 – \$57,060,000

It should be noted that the OPCC does not include the following items:

- Rehabilitation of the Mad River intake and Pump Station No. 6
- Raw water pipeline to the IWTF
- Additional pumping, if needed, to deliver raw water to the IWTF
- Grit removal
- Land acquisition
- Expansion to 9 mgd and nominal 36 mgd

SUMMARY

The proposed Mad River water treatment facility to reduce the Mad River water turbidity during and following winter storm events down to between 5 and 10 NTU includes a “conventional pretreatment” clarification process with rapid mix-coagulation, tapered flocculation, and sedimentation. Sand drying beds are proposed for processing of the wet sludge solids produced from treating the Mad River water during high flow events when turbidity can be as high as (and exceed) 1,000 NTU. The IWTF would include an operations building, a chemical storage facility, a 2-MG water storage tank, and a treated water pump station. The total project cost for the initial 4.5 mgd capacity IWTF is estimated to be \$40,760,000 with a cost range between \$26,490,000 and \$57,060,000. The total area required for the IWTF with 36 mgd capacity is about about 4.5 acres if mechanical dewatering is implemented for solids handling.

Plant staffing and operation and maintenance (O&M) cost were not developed as a part of the study. However, the staffing needed to operate and maintain the IWTF is anticipated to be similar to the staffing for the District’s TRF.

Metal (aluminum) residual concentration in the clarified water from coagulation with alum should be relatively low and should not increase background aluminum concentrations appreciably. Jar tests can be performed to confirm that the aluminum residual concentration in the treated water will be at a level acceptable to Nordic. If the aluminum concentration in the treated water is unacceptable to Nordic or other customers, ferric chloride could alternatively be used as the primary coagulant.

The sludge production estimates and OPPC were developed assuming use of alum as the primary coagulant. The OPPC, with ferric chloride as the primary coagulant, may be slightly higher, as ferric chloride is corrosive to stainless steel materials and would require more costly materials (such as Hastelloy or titanium) for the wetted parts in the coagulant chemical storage and feed system to provide satisfactory corrosion-resistant service. Also, the use of ferric chloride would produce slightly greater volume of solids and could require slightly larger sand drying beds. Although ferric chloride dosage would be lower than the alum dosage (by about 55-percent on a weight basis), it has a higher solids production factor (2.9 lbs of solids per 1 lb of “dry” ferric chloride [without including its associated waters of hydration] added compare to 0.44 lb of solids per 1 lb of “dry” alum added [when its associated waters of hydration are included]).

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The O&M cost associated with ferric chloride use may be lower than for alum. Ferric chloride tends to be slightly more expensive than alum on a dosage (weight-based) comparison, but overall chemical cost may be slightly lower due to the lower dosage needed to achieve charge neutralization. The disposal of the ferric chloride dried sludge may also be less costly since it can be used as a soil amendment, whereas alum sludges are undesirable for soil amendment.

ATTACHMENTS

Figure 1. Conceptual Site Layout 1

Figure 2. Conceptual Site Layout 2

Attachment A. Nordic Water Quality Requirements Memorandum

Attachment B. Jar Test Protocol to Evaluate Coagulation, Flocculation, and Sediment-clarification of Mad River Water and Jar Test Results

ATTACHMENT A

Nordic Water Quality Requirements Memorandum

ATTACHMENT B

Jar Test Protocol to Evaluate Coagulation, Flocculation, and
Sediment-clarification of Mad River Water and Jar Test Results

Nordic Aquafarms to request funding, incentives for Samoa cleanup, water delivery

Supervisors to hear details of request at Tuesday meeting



Nordic Aquafarms executive Marianne Naess speaks in May about the treated water from a large land-based fish farm that would be pumped into the ocean offshore of Samoa. (Shaun Walker — The Times-Standard [file](#))

By [SHOMIK MUKHERJEE](#) | smukherjee@times-standard.com |

PUBLISHED: July 22, 2019 at 8:45 pm | UPDATED: July 22, 2019 at 8:52 pm

A Norwegian fish farm company looking to become a [West Coast](#) hub for aquaculture is asking for financial incentives from Humboldt County, according to a company presentation scheduled for the Board of Supervisors meeting Tuesday.

Earlier this year, Nordic Aquafarms was approved to lease 30 acres of property at the site of the former Samoa pulp mill, a three-decade agreement for a company that aims to make the county an economic hotspot for seafood supply.

But before that happens, the company is requesting the county fund or provide financial incentives for two possible “no-go” areas that could be “show-stoppers” for the project, a company presentation states.

Specifically, Nordic wants to cover the costs of treating water it would deliver to the Samoa Peninsula for use in the company’s proposed indoor, land-based fish farms. Since the “available surface water has high and variable turbidity,” the cleaning costs are still unclear, according to the presentation.

The company is also requesting funding security to clean up a brownfield site. The last Samoa pulp mill closed in 2009, leaving behind hazardous waste and [contaminated soil](#) on the property.

These are “local risks that our projects normally would not have to deal with, and thus we would not incur costs on,” reads a slide in Nordic’s presentation. “Our request is specifically related to risk and cost alleviation related to these issues.”

A representative for Nordic Aquafarms didn’t provide comment for this story by the Times-Standard’s publishing deadline. Company reps will present Nordic’s entire fish-farming plan, along with the request, at Tuesday’s Board of Supervisors meeting.



Nordic Aquafarms’ new lease won’t supplant the existing businesses operating at the Samoa pulp mill site. (Times-Standard file)

Larry Oetker, who oversaw the pulp mill being leased out to Nordic, said Monday he believes a county-approved contribution of public dollars into the cleanup would be a “wise investment.”

“It’s no secret that the former pulp mill is not an easy site to develop on,” said Oetker, the executive director of the Humboldt Bay Harbor, Recreation and Conservation District. “We’ve been working with the U.S. Environmental Protection Agency on the brownfield project for a long time.”

While Nordic's request is centered around the fish-farming project, Oetker said the benefits of addressing the pulp mill contamination extend way beyond aquaculture.

"The tax returns will more than pay for the investment," he said.

Incentivizing a brownfield cleanup could be a long-term boon for the site's infrastructure, echoed 4th District Supervisor Virginia Bass. As the board gears up to discuss Nordic on Tuesday, Bass said she is excited — and views this as a chance to welcome the new neighbors.

"If you don't treat companies well, you're not going to get a good reputation in the circles," Bass said. "I want us to be a community that provides great customer service to businesses that come here."



Humboldt Bay Harbor District Executive Director Larry Oetker said county-approved financial support for the fish farm would be a "wise investment." (Shaun Walker — The Times-Standard)

Meanwhile, the company's request for help with water treatment also received support, in principle, from another local official.

"In general terms, I think all of us would like to see some type of funding source," said John Friedenbach, general manager of the Humboldt Bay Municipal Water District. "We're supportive of new industry coming into Humboldt County, looking for water."

Since the closure of the mills, the district has been looking to deliver and sell 65 million gallons of water that now go unused. The district's industrial system remains operational, but maintenance has been minimal for about a decade, Friedenbach said.

And like the pulp mill, Nordic would use surface water from nearby bodies of water like the Mad River, which runs clear during the summer but turns into a "chocolate" color during the winter months when high flows stir up the sediment in the river banks.

"The turbidity is a challenge that needs to be investigated and addressed," Friedenbach said.

He added that the county, along with the North Coast at large, is “uniquely situated” to carry an excess water supply.

“To me, it makes sense to try to locate businesses in Humboldt County that can utilize water and provide economic benefits,” he said.

Nordic aims to create 80 jobs in Humboldt County. The company bills itself as a non-GMO fish culturing operation looking to build “synergies” with existing fishermen, Nordic executive Marianne Naess said in February.

But some fishermen at a Harbor District meeting earlier this year spoke skeptically of the fish farm’s exposure to tsunami dangers and its potential encroachment of the fishing industry.

Tuesday’s meeting will mark the board’s first official opportunity to discuss Nordic’s vision for aquaculture at Humboldt Bay.

Shomik Mukherjee can be reached at 707-441-0504.

Supervisors offer support for Nordic Aquafarms incentives

Water system improvements could cost from \$16 million to \$34 million, says county official



Nordic Aquafarms CEO Erik Heim addressed the Humboldt County Board of Supervisors at the board's meeting Tuesday. (Lynette Mullen, Nordic Aquafarms –Contributed)

By [SHOMIK MUKHERJEE](#) | smukherjee@times-standard.com |

PUBLISHED: July 23, 2019 at 6:35 pm | UPDATED: July 23, 2019 at 11:54 pm

A Humboldt County task force will attempt to find ways of incentivizing extensive infrastructure improvements at the Samoa Peninsula, where a major aquaculture project is soon to arrive.

ADVERTISING

Nordic Aquafarms, a highly anticipated fish-farming company promising to create 80 local jobs, wants the county to first address surface water turbidity concerns and a [toxic](#) brownfield problem that have existed at the Samoa Peninsula since the closure of the industrial pulp mills last decade.

These infrastructure concerns are outside the scope of Nordic's project, the company's chief executive said Tuesday at the Humboldt County Board of Supervisors meeting. He suggested the county set up financial incentives or other funding structures to fix the issues.

“What we are summing up as a question here is what the county’s plan is, in terms of preparing the peninsula with the necessary infrastructure for some of these challenges,” said Erik Heim, the CEO of Nordic Aquafarms.

Scott Adair, the county’s director of economic development, addressed the board alongside Heim. He said the water turbidity treatment could range between \$16 million and \$34 million in costs.

Nordic’s development, Adair said, is the “catalyst” for the project, but “really, any other development on the peninsula” would benefit from the county addressing the problems.

The county has formed a task force for engaging the development of infrastructure. Supervisors on Tuesday were largely supportive of setting up financial incentives for Nordic to mitigate the costs of cleaning up the pulp mill site and treating the murkier surface water from local rivers.

Shaping up the infrastructure, they mostly agreed, could be a long-term boon for a variety of future businesses.

“Incentives are often strange because you could be just giving money away,” said Supervisor Virginia Bass, whose 4th District includes the Samoa Peninsula. “But the peninsula is on the verge of a rebirth.

“It’s hard for some people to be OK hearing the word incentive, and I think it’s something we just have to start being ready to do,” she continued.

First District Supervisor Rex Bohn suggested off-hand that the financial incentives could take the form of future tax relief, so long as Nordic follows local guidelines as it brings its fish farm off the ground.

The county task force will approach the board with potential incentives at a later date. The task force will include representatives from the county’s economic development, public works and planning and building departments. It will work with other local stakeholders including the Humboldt Bay Municipal Water District.

Third District Supervisor Mike Wilson noted that the discussion of infrastructure improvements shouldn’t be limited to Nordic’s plans for aquaculture.

“This is not an unusual discussion that a community might have when we want to seek out economic development,” Wilson said. “It just gets a little bit squirrely once one company’s asking for that.”

He later said he’s not generally in favor of “tax breaks” for companies, though he conceded these are public infrastructure issues that affect the entire community.

Adair said his department has already been searching for outside grants to address the infrastructure challenges. Ultimately, he said, there would be a cost to avoiding improvements if the county doesn't address them.

Nordic executives have made the rounds in 2019, making their company pitch to a laundry list of local government bodies and community groups. The company's plan is to set up indoor, land-based aquaculture tanks.

Fish-farming is not yet a prominent economic venture in California, Heim has noted, which he says leaves room for Humboldt County to come out ahead as a [West Coast](#) seafood industry leader.

Shomik Mukherjee can be reached at 707-441-0504.

Mad River Union
July 31, 2019

Site issues could scuttle fish farm

Company asks for funding

Daniel Mintz

MAD RIVER UNION

SAMOA PENINSULA

— Several months after announcing its intent to construct a \$400 million aquaculture facility on the Samoa Peninsula, a Norwegian company has flagged water infrastructure and site contamination issues that could be “show stoppers.”

At the July 23 Board of Supervisors meeting, the company’s request for “financial incentives/funding” to address the issues was met with commitment to seek grant funding.

But the timing and success of that process is uncertain and the company’s board of directors will meet in September to decide whether or not to proceed with the project’s permitting.

The Nordic Aquafarms company seemed committed to constructing the land-based facility, which would produce 22,700 metric tons of gutted Atlantic salmon or steelhead per year and serve 50 million West Coast customers, when it first described its plans last February.

But in a PowerPoint presentation for supervisors, surface seawater and industrial freshwater supplied by the Humboldt Bay

Municipal Water District are described as needing “rigorous treatment” to be suitable for aquaculture. And the 30-acre project site involves “Brownfield clean-up with unknown risks and costs.”

Nordic President Erik Heim told supervisors that the company’s board of directors will reach a “decision point” on the project in September and he grasped for information on the county’s plans for addressing the former Samoa pulp mill site’s challenges.

“The freshwater source does have its challenges in terms of turbidity and bacterial spikes during parts of the year,” he said, adding that it’s “not suitable for aquaculture and perhaps other types of activities dependent on water.”

Heim told supervisors that in addition to the infrastructure and contamination concerns, tsunami and earthquake mitigations compound the project’s risks and costs.

“What we are summing up, as a question here, is what the county’s plan is in terms of preparing the peninsula with necessary infrastructure for some of these kinds of activities,”

AQUAFARM ❖ A3

Aquafarm | Infrastructure-lacking

❖ FROM A1

he said.

In a public meeting in Eureka last May, the company's commercial director said that the Humboldt County site is the best possible choice on the entire West Coast.

But county Economic Development Director Scott Adair said the site's water delivery infrastructure will need millions of dollars – and possibly tens of millions of dollars – of investment before it can be used by Nordic or any other user of the site.

Adair noted that the infrastructure hasn't been used or maintained since the pulp mill closed almost a decade ago.

"The deferred maintenance costs would be in the several-million dollar range just to address immediate costs which need to occur throughout the entire infrastructure system," he said.

The cost of upgrading the system to make it ready for commercial use would range from \$16 million to \$34 million, he continued.

The Samoa site is in Supervisor Virginia Bass' district. She said that "the peninsula is on the verge of a rebirth and I think it's really important to find a way to coordinate how we can help make this happen."

Last June, supervisors approved forming a task force to address infrastructure issues related to economic development. That effort is just beginning and Supervisor Estelle Fennell referred to a letter from the Humboldt Bay water district that recommends collaboration with the county, the Harbor District, which owns the site, and Nordic to seek federal and state grant funding for infrastructure improvement.

"We can't say right now that 'we're go-

AQUAFARM PRESENTATION This month's Humboldt Bay Harbor Working Group luncheon on Wednesday, July 31 includes a presentation on the Aquafarming project proposed by Nordic Aquafarms for the Samoa Peninsula. Lynette Mullen, Nordic Aquafarms' local community liaison, will give an overview of the project and answer questions. This presentation was scheduled for last May's luncheon but was canceled. The luncheon is a "no host" event, held at the Samoa Cookhouse. Lunch service starts at noon; and the presentation starts around 12:30 p.m.

ing to do this and that' but I think we can indicate that we're willing to work with you," she said.

Supervisor Mike Wilson was a harbor district commissioner when the district took control of the pulp mill site several years ago and had 2.7 million gallons of stored toxins removed.

"I think this is not an unusual discussion that a community might have when you want to seek out economic development," he said.

The community needs to be convinced that infrastructure and clean-up investments will "generally benefit the county and not just one company," he continued.

Supervisors voted to have the county's task force identify "funding and financing solutions" to the site issues and make a presentation to the board within 45 days.

Though not discussed in detail during the presentation, the Samoa site has many advantages. It's previously developed, zoned for aquaculture, has an existing outfall pipe, is near water sources and is centrally located in the West Coast region Nordic is targeting.

County Agrees to Pursue Infrastructure Funds in Hopes of Landing Fish Farm on Samoa Peninsula

RYAN BURNS / BUSINESS, LOCAL GOVERNMENT LOST COAST OUTPOST – 7/24/2019



Nordic Aquafarms President Erik Heim addresses the Board of Supervisors on Tuesday

The Humboldt County Board of Supervisors on Tuesday unanimously approved a motion directing staff to go after state and federal grants — and any other possible sources of funding — to help pay for infrastructure improvements on the Samoa Peninsula.

The long-term goal is to spruce up that stretch of land, giving it a reliable supply of clean water and removing toxic chemicals from the old pulp mill site in hopes of fostering an industrial rebirth there. In the short-term, the county hopes to land one big fish — namely, Norwegian company Nordic Aquafarms, which has [proposed building a massive land-based fish farm](#) on the Harbor District's Redwood Marine Terminal II property (formerly the pulp mill location).

Company president Erik Heim told supervisors at Tuesday's meeting that his board of directors plans to make a decision in late September about whether or not Humboldt County is the right place for this \$400 million investment. His question: What is the county willing to offer in the way of incentives?

"I'm here to understand what the county is prepared to do in terms of working with us [and] assisting us ... in getting some potential funding sources," Heim said.

As he delivered a PowerPoint presentation, Heim explained that there are two potentially expensive problems that could make the project financially infeasible here. One is finishing the cleanup on the contaminated brownfield; the other is repairing and upgrading the infrastructure of the Humboldt Bay Municipal Water District to ensure a reliable supply of water that's clean enough to meet their needs.

The existing supply, which is delivered via pipeline from the Mad River, gets cloudy with sediment and bacteria during the high-flowing winter months. This turbidity makes the water unsuitable for aquaculture. According to Scott Adair, Humboldt County's director of economic development, it will cost the water district between \$16 million and \$34 million to address deferred maintenance and upgrade the system.

Heim said he's been talking with county staff about what's available in terms of state and federal grants and other incentives. He noted that the Humboldt Bay Harbor, Recreation and Conservation District has already received a cleanup grant from the Environmental Protection Agency but more money will be needed as Nordic explores the cost of demolishing old pulp mill buildings.

Third District Supervisor Mike Wilson noted that the water district had submitted a letter expressing their willingness to collaborate with Nordic, the county and others to pursue state and federal grant funding. And Wilson said that's a logical process for the county to participate in.

"From my perspective, I think this is not an unusual discussion that a community might have when we want to seek out commercial development," Wilson said. He added that it may seem "a bit squirrely" when a single company is requesting such grant funds but in fact the infrastructure improvements would benefit the whole community.

Fourth District Supervisor Virginia Bass agreed, saying the peninsula is "on the verge of rebirth," with two or three other projects looking to locate there. Other California counties have dedicated incentive programs, she noted.

Second District Supervisor Estelle Fennell said she agrees with the water district's statement regarding a willingness to collaborate. "So, if teamwork can make this move forward, I think this is a good project for the county."

Steve Madrone, the supervisor representing the Fifth District, said he applauds Nordic for addressing environmental and infrastructure issues early in the process, and he also praised the company's Scandinavian approach toward employment, meaning their commitment to paying prevailing wages and engaging with unions.

"That's a big positive from my perspective," Madrone said.

But he also said he worries about a repeat of the past, when industrial owners walked away from their properties leaving huge cleanup projects in the county's lap. "I'm looking for bonding," he said.

Board Chair and First District Supervisor Rex Bohn said that it's great to talk about grants but he didn't know how many might be available before the September deadline when Nordic's board plans to make a decision.

During the public comment period, local resident Lynette Mullen, who has been hired as Nordic's local community liaison, said that while it's true her employer stands to benefit from any grants or incentives the county lines up, there's a larger opportunity for the county in reducing barriers to development on the peninsula and developing a reputation for collaborating with businesses.

“So I think there’s a lot of opportunity for good here,” Mullen said.

Adair endorsed that perspective, saying the county’s economic development office has been engaged with the U.S. Department of Agriculture, the state’s Employment Development Department and other agencies in pursuit of grant opportunities. “Nordic has just been a catalyst for a deeper dive,” Adair said.

Fennell wound up making a motion directing staff to work with the water district and other agencies to pursue funding and financing solutions for infrastructure on the peninsula and report back to the board within 45 days.

After some tinkering with the language of the motion, the board passed it unanimously.

Before the vote, Bass delivered something of a rallying cry: “If we’re really serious about economic development, we have to start acting like we are.”

Fish farm ‘potentially’ in jeopardy without infrastructure fix, Nordic Aquafarms says

Water district voices concerns about picking up costs



Lynette Mullen, Nordic Aquafarms’ community liaison to Humboldt County, addressed public concerns at the Harbor Working Group’s meeting Wednesday. (Shomik Mukherjee — The Times-Standard)

By [SHOMIK MUKHERJEE](#) | smukherjee@times-standard.com |

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With a “huge” price tag looming over infrastructure problems at the Samoa Peninsula, a representative from Nordic Aquafarms said Wednesday the company’s plan to build a large fish farm at the site could be in trouble if the quagmire remains unaddressed.

“The county’s recognizing this project is — I’m not saying it’s in jeopardy, but it potentially is, if we don’t solve this problem,” said Lynette Mullen, Nordic Aquafarms’ community liaison in Humboldt County.

Nordic, a much-anticipated arrival to Humboldt County, promises to create 80 local jobs. But the company has identified two major problems standing in its way.

Local surface water needed for Nordic’s proposed fish farm can be highly turbid, or murky, during the winter months, and the cost of treating it could range into the double-digit millions. Meanwhile, the defunct Samoa pulp mills left behind hazardous waste, turning portions of the site into a toxic brownfield.

Without a locally driven solution, Nordic will be left to convince investors the costs involved in mitigating these factors are worth it, Mullen explained. And while Humboldt County has called on a task force to look into the issues — with a staff update coming in 45 days — Mullen emphasized urgency.

“Ultimately, these numbers have to make sense,” she said. “So the (company’s) argument in September is hopefully compelling enough to convince investors that whatever costs there are in developing here is worth it.”

Mullen presented Wednesday in front of the Humboldt Bay Harbor Working Group, a citizens' coalition hoping to boost economic growth at Humboldt Bay. It meets once a month, hosting a speaker presentation about harbor developments.

The group has a penchant for challenging speakers, asking urgent questions and expecting well-prepared answers. For Mullen, the session at the Samoa Cookhouse was no different.

"I can tell you that ... we ain't going to pay," said Dennis Mayo of the McKinleyville Community Services District. He explained that his district is billed for water by the Humboldt Bay Municipal Water District, which manages the water infrastructure for the Samoa site.

"Our (water) customers are not going to pay ... any more, so this operation is going to have to pony up some, and you're going to have to get politically active to get grant money and other types of investments," Mayo said. "If you're counting on (us)? You can forget it."

"I hear you, Dennis, loud and clear!" Mullen responded.



Humboldt Bay Harbor Working Group members questioned Lynette Mullen about the costs behind infrastructure concerns at the Samoa Peninsula. (Shomik Mukherjee — The Times-Standard)

Earlier this month, the Humboldt County Board of Supervisors called on its staff to start looking for measures to address the issues. Finding state or federal grants to fix the mess, supervisors agreed, would be a long-term benefit for the community, extending beyond Nordic's project.

Mullen echoed the sentiment. The Humboldt Bay Harbor, Recreation and Conservation District, which in February leased 30 acres of Samoa property to Nordic, is using the company as a "catalyst" to attract other businesses to the peninsula, she said.

One speaker pressed Mullen on Nordic's promise to hire locally. Other projects, he said, have come to Humboldt Bay in the past touting economic development but later "turned their backs" on the community, hiring construction workers from Europe.

"Can they commit to hiring from local apprenticeship programs?" the speaker asked.

Mullen replied she is already strengthening local connections to the company so that jobs are available to Humboldt County workers.

Vivian Helliwell, a director at the Pacific Coast Federation of Fishermen's Associations, called Mullen's attention to Humboldt County's presence in a seismically active area. The area is "overdue" for a geological fault shift, she said.

"Nothing's going to be built out there unless it mitigates for the potential risks," Mullen responded.

Nordic has made the rounds for months, speaking to community groups and government bodies about the company's vision. In its finished form, the company's proposed fish farm is billed as a West Coast pioneer of aquaculture.

Concerned citizens have challenged Nordic CEO Erik Heim at a number of meetings. The discussions have often become tense. But by the end of today's meeting, attendees appeared receptive to Mullen's performance.

Mayo, who had spoken up multiple times during the luncheon, offered Mullen some unorthodox praise on the way out.

"You should do all the presentations," Mayo told her, "because your guys don't do a very good job."

Shomik Mukherjee can be reached at 707-441-0504.

Got water? Trinidad Rancheria testing new supply ahead of Coastal Commission meeting

Coastal Commission to meet in Eureka next week to discuss issue



With its latest design, the Trinidad Rancheria's hotel project is intended to be more compatible with the surrounding bay. (Contributed)

By **SHOMIK MUKHERJEE** | smukherjee@times-standard.com |

PUBLISHED: August 1, 2019 at 8:55 pm | UPDATED: August 1, 2019 at 8:56 pm

A major hotel development stalled at the state level last month over its uncertain water supply, but now the project manager says the hotel may have struck blue — though it's too soon to be certain.

The Trinidad Rancheria's hotel project has met controversy at every step since its announcement last year. Its most recent hurdle: The state Coastal Commission objected to the project last month, taking issue with the Rancheria's plans to rely on the city of Trinidad's water — a setup the city had not yet agreed to support.

But now the tribe has "discovered" a potential alternate water source. And with the Coastal Commission set to meet next week in Eureka, the project manager hopes the timing is enough to earn the tribe at least conditional support from the commission.

"The Rancheria did hire a drilling company to come in several weeks ago and look for an on-site water source," said project manager David Tyson. "They did some drilling and were able to locate a source. But a lot of additional work is needed to be done to verify the quality and quantity of water that has been discovered."

Over the coming weeks, the water will be treated and tested, Tyson said. The drilling company will also continue digging to ensure there's enough water to fully provide for the hotel's needs.

News of the Rancheria locating a water source became public after commission staff posted online an "ex parte communication" disclosure form. Commissioners are required to disclose when someone tied to a matter on the commission's agenda makes contact.

In this case, former Commissioner and former Humboldt County 5th District Supervisor Ryan Sundberg sent a text message to Commission Chair Dayna Bochco, the North Coast Journal first reported earlier this week.

Sundberg's last meeting on the commission was in March. He is a member of the Rancheria tribe and now works at the Cher-Ae Heights Casino and Bingo, next to the spot where the hotel would be built.

"Hi Dayna, we have had (drilling) rig looking for well water so we don't have to depend on the City of Trinidad," states Sundberg's text message. "Today was very exciting, we hit water today and will be able to have well water treated and used for the hotel. Can't wait to see you all when you come up next Month! Best Ryan."

A call to Sundberg requesting comment on the story was not immediately returned. Tyson declined to comment on Sundberg's text message.

Trinidad city manager Eli Naffah said he hasn't heard much about the Rancheria's water discovery. The city has not yet completed studies of its own water supply, he said, so he is eager to see if the tribe has found an alternative.

"The whole community still has concerns that the project would blend in well with the area," Naffah said. "We'll be attending the meeting next week."

At 100 rooms, the hotel has earned critics who fear the building would disrupt Trinidad's scenic vista and pose environmental impacts. Early on, a small citizens' alliance accused the tribe of not being transparent about the project's details.

More recently, current 5th District Supervisor Steve Madrone joined Trinidad residents in calling for the California Coastal Commission to address the project locally — one factor that led to the commission balking at its June meeting in San Diego.

Now the hotel's future will be on the table at the commission's meeting next week at the Wharfinger Building in Eureka. Since the Rancheria answers not to the state but the federal Bureau of Indian Affairs, it doesn't need to take a commission objection as law.

Nevertheless, the tribe has expressed a willingness to respect the commission's decision-making. Tyson said the tribe hopes the commission offers "conditional concurrence," or support for the project pending more information about the water source.

"Last time, we actually had given an alternate recommendation ... on the water issue," Tyson said. "(The commission) chose to go with the staff recommendation. This time, we're hoping we can get at least a conditional concurrence."

Shomik Mukherjee can be reached at 707-441-0504.

After mistaken abatement notices, Humboldt County adjusts cannabis enforcement

Planning director: 'We refined a lot of things'



Earlier this month, authorities destroyed more than 2,000 cannabis plants and 85 pounds of process cannabis at a non-compliant cannabis grow in the Hyampom area. (Humboldt County Sheriff's Office — Contributed)

By [SHOMIK MUKHERJEE](#) | smukherjee@times-standard.com |

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After a number of Humboldt County residents [received notices to stop growing cannabis](#), they scrambled to prove that they didn't — and they were successful.

Following their efforts, the county has adjusted its system of sending out abatement [notices](#) to people suspected of cultivating cannabis without their permits. The abatement notices still carry threats of \$10,000-a-day fines after a 10-day period, but the issuing field official now has the authority to examine the property and retract the notice right away.

The county's Planning and Building department is also shifting attention away from abatement and toward helping growers attempting to become compliant, said John Ford, the department's director.

"We refined a lot of things," Ford said. "We want to [make sure](#) that when we do post a notice, it is truly someone who has been engaged in cultivation."

In the past fiscal year, the county still received more than \$3.5 million in abatement revenue, an increase from the first two years of the legal era. The fiscal year ran from July 1, 2018 until June 30, 2019. In over two weeks since then, the county has received a few thousand dollars.

Ford said the county sent out 50 abatement notices over the past month, but large-scale enforcement efforts will begin to trend downward, he said.

“Frankly, one of the things we’re doing is refocusing a little bit,” he said. “What we’re seeing is there aren’t many of the large, egregious grows outside of the permit system.”

Abatement revenue goes into the county’s general fund. As of November 2018, [the county had received \\$1.2 million](#) in abatement revenue through the entire legal era. It had billed an additional \$1 million that remained unpaid. Ford couldn’t elaborate Thursday how much money is yet to come in from growers who haven’t yet responded.

The county continues to track for suspected non-compliant grows with a satellite [mapping software](#). Enforcement [ramped up by 700%](#) in 2018.

Meanwhile, the Humboldt County Sheriff’s Office stirred drug-war era [anxiety](#) earlier this month when low-flying National Guard helicopters circled the southern parts of the county in an effort to crack down on the “illicit” marijuana industry.

Farmer Tom O’Gorman, one of the Willow Creek farmers mistakenly sent an abatement notice last month, did not immediately respond to a request for comment.

Shomik Mukherjee can be reached at 707-441-0504.

RELATED ARTICLES

- **Humboldt County threatened cannabis fines. They were growing peaches and tomatoes.**
- **Cannabis code enforcement up 700% in 2018, brought in \$2 million for Humboldt County**

'A Higher Priority'

County, water district square off over zoning changes

BY ELAINE WEINREB



COURTESY OF THE HUMBOLDT BAY MUNICIPAL WATER DISTRICT

One of the Humboldt Bay Municipal Water District wells in the Mad River that draw water from the aquifer under the riverbed.

If you've read stories about the disaster afflicting Flint, Michigan, you are probably grateful we still have good drinking water in Humboldt County. But the agency that provides water to a majority of county residents is increasingly worried about the future and going head-to-head with the county Planning and Building Department to protect water quality.

About half of Humboldt's residents get drinking water from the Mad River, including Eureka, Arcata and McKinleyville. The water is of unusually good quality, coming from the river's bed, where it is naturally filtered through layers of sand, and the Humboldt Bay Municipal Water District (HBMWD) says its mission is to maintain that water quality. But the district fears changes in the county zoning code could open up properties in the Mad River watershed to increased industrial uses that could pose a threat to the district's water source.

"The Humboldt Bay Municipal Water District is concerned about the cumulative effects of increased industrial activities within the Mad River watershed and the potential impacts to our water quality that the district provides to approximately 88,000 residents of Humboldt County," District General Manager John Friedenbach wrote in a June 13 letter to the Humboldt County Board of Supervisors. "Zoning text amendments that expand and broaden the principally

permitted industrial uses should be weighed against the environmental and health threats inherent in those activities and whether it is in the public's interest and welfare to expand those activities in environmentally sensitive areas."

This isn't the first time the district has raised alarms about potential threats to water quality in the Mad River. Last year, neighbor Mercer-Fraser Co., which has operated a gravel mine adjacent to the river for decades, asked the county to change its zoning to industrial so that it could open a cannabis extraction business on the site, which many feared would expose the river to dangerous chemicals. After a lot of public backlash, Mercer-Fraser withdrew its application.

Other cannabis extraction facilities in the Mad River watershed have also applied for permitting. The HBMWD usually asks the planning commission to deny these permits while citing concerns about its ability to maintain the purity of the river water.

But the issue of immediate concern to the district stretches far beyond a single permit application.

The county planning department and the board of supervisors are currently going through the contentious task of re-writing the zoning code so that it will conform to the 2017 General Plan Update. This process has re-ignited numerous political brushfires that plagued the county for the past 20 years throughout the GPU process and, although the effort has been going on for several months, little progress has been made.

Most of the parcels adjoining the Mad River are currently zoned Agricultural-Exclusive (AE). Despite the name, AE allows several non-agricultural uses, including surface mining. Another common rural agricultural land use designation, Agricultural-General (AG), allows oil and gas drilling, as does the Timber Production Zone (TPZ).

After several months of squabbling, the planning commission and the board have yet to come to a clear agreement as to what can and cannot be done in these zones.

HBMWD is currently lobbying the board for broader protection of the Mad River watershed. The district was particularly concerned about a phrase that would have permitted "historical" uses by legitimizing any current industrial activities in a streamside management area, even if those uses were illegal or unpermitted at the time. The word "historical" was finally removed by the board at its June 18 meeting, although mining remains as an allowable use.

Friedenbach has sent the county numerous letters detailing his concerns. Letters and emails sent to the commission in March and April did result in the commission agendaizing the issue for discussion. In another letter sent to the board June 13, Friedenbach states that the general plan shows surface mining as incompatible in Agricultural-Exclusive or Timber Production zones and questions whether the impacts of allowing such uses were studied in the GPU's environmental impact report.

The June 13 letter to the board followed one sent a week earlier that raised alarm about the perceived threat to the region's drinking water from principally permitting "historic" uses.

"These activities pose a continuing threat to our community's health and water security, and the district continues to be concerned that the zoning ordinance will be revised to summarily permit previously unpermitted activities or prior potentially illegal activities rather than be used as a forward-looking tool to adequately protect the health, safety and welfare of your constituents," Friedenbach wrote. "The zoning text amendments must be in the public interest to be adopted ... however, to the extent that the proposed revisions allow changes in uses that may detrimentally impact drinking water quality, they are not in the public interest."

While the board would ultimately agree to drop the provision allowing historical uses to continue, Friedenbach now believes he has found a better path forward than continuing to scramble to provide piecemeal protections for the 75-mile long Mad River watershed.

Browsing through the General Plan, he discovered a section under the Water Resources Element that specifically protects watersheds that are critical to providing water to communities. Only two such watersheds were mentioned: Francis Creek, which supplies the city of Ferndale, and Luffenholz Creek, which supplies the city of Trinidad.

Friedenbach reasoned that the Mad River, which supplies Eureka, Arcata and McKinleyville, should qualify for similar protection.

At the July 11 meeting of the water district board, Third District Supervisor Mike Wilson and Fifth District Supervisor Steve Madrone, as well as county supervising planner Michael Richardson, were present in the audience to listen to and comment on the proposal to list the Mad River as a "Critical Water Supply Area."

Both of the supervisors indicated they thought the idea had a lot of merit. Madrone pointed out that in addition to the historical problems with surface

mining and illegal diesel storage, illegal cannabis production was adding to the environmental problems facing the river. But he warned them that "time is of the essence" in getting the zoning code changed to protect the Mad River watershed.

Wilson and Richardson walked the water district through the complex process of getting an issue heard by the board, urging them to first go through the planning commission and to ask the policy-makers to give the matter priority over the long list of other zoning amendment changes.

"It's not the only thing we have to do," Wilson commented with characteristic understatement.

The water district has been including its attorney on recent correspondence with the county. (Actually, the county is facing so many implied and overt threats of litigation over the zoning code amendments that county counsel, at the board's July 9 meeting, advised the supervisors to hold off on taking further action until the legal issues raised could be thoroughly studied.)

For their part, the water district and Friedenbach seem poised to continue pressing to make protecting the Mad River watershed — and the 88,000 people who depend on it for drinking water — a priority as the process moves forward.

"The district believes that protecting water quality, which is one of the stated primary purpose(s) of establishing standards within the county's general plan, should receive a higher priority during your deliberations regarding the proposed zoning text amendments," Friendebach wrote in the June 13 letter.

Elaine Weinreb is a freelance journalist. She tries to re-pay the state of California for giving her a degree in environmental studies and planning (Sonoma State University) at a time when tuition was still affordable.

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16 **UNITED STATES BANKRUPTCY COURT**
17 **NORTHERN DISTRICT OF CALIFORNIA**
18 **SAN FRANCISCO DIVISION**

19 **In re:**

20 **PG&E CORPORATION,**

21 **- and -**

22 **PACIFIC GAS AND ELECTRIC**
23 **COMPANY,**

24 **Debtors.**

- 25 Affects PG&E Corporation
- 26 Affects Pacific Gas and Electric Company
- 27 Affects both Debtors

28 ** All papers shall be filed in the Lead Case, No. 19-30088 (DM).*

Bankruptcy Case
No. 19-30088 (DM)

Chapter 11

(Lead Case) (Jointly Administered)

**DEBTORS' FIRST OMNIBUS REPORT AND
OBJECTION TO CLAIMS ASSERTED
PURSUANT TO 11 U.S.C. § 503(b)(9)**

Date: August 14, 2019
Time: 9:30 a.m. (Pacific Time)
Place: United States Bankruptcy Court
Courtroom 17, 16th Floor
San Francisco, CA 94102

1 PG&E Corporation (“**PG&E Corp.**”) and Pacific Gas and Electric Company (the “**Utility**”), as
2 debtors and debtors in possession (collectively, “**PG&E**” or the “**Debtors**”) in the above-captioned
3 chapter 11 cases (the “**Chapter 11 Cases**”), hereby submit this first omnibus report and objection
4 (“**Objection**”) to certain claims (the “**503(b)(9) Claims**”) identified on Exhibit A hereto that have been
5 asserted as of the date hereof by various claimants (each a “**Claimant**”) pursuant to section 503(b)(9) of
6 title 11 of the United States Code (the “**Bankruptcy Code**”). In support of the Objection, the Debtors
7 submit the Declaration of Robb C. McWilliams, filed contemporaneously hereto.

8 A proposed form of order granting the relief requested herein is annexed hereto as Exhibit B (the
9 “**Proposed Order**”).

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1 **I. JURISDICTION**

2 The Court has jurisdiction to consider this matter pursuant to 28 U.S.C. §§ 157 and 1334, the
3 *Order Referring Bankruptcy Cases and Proceedings to Bankruptcy Judges*, General Order 24 (N.D.
4 Cal.), and Rule 5011-1(a) of the Bankruptcy Local Rules for the United States District Court for the
5 Northern District of California (the “**Bankruptcy Local Rules**”). This is a core proceeding pursuant to
6 28 U.S.C. § 157(b). Venue is proper before the Court pursuant to 28 U.S.C. §§ 1408 and 1409.

7 **II. BACKGROUND**

8 On January 29, 2019 (the “**Petition Date**”), the Debtors commenced with the Court voluntary
9 cases under chapter 11 of the Bankruptcy Code. The Debtors continue to operate their businesses and
10 manage their properties as debtors in possession pursuant to sections 1107(a) and 1108 of the Bankruptcy
11 Code. No chapter 11 trustee or examiner has been appointed in either of the Chapter 11 Cases. The
12 Debtors’ Chapter 11 Cases are being jointly administered for procedural purposes only pursuant to
13 Bankruptcy Rule 1015(b).

14 On February 12, 2019, the United States Trustee (the “**U.S. Trustee**”) appointed an Official
15 Committee of Unsecured Creditors (the “**Creditors Committee**”). On February 15, 2019, the U.S.
16 Trustee appointed an Official Committee of Tort Claimants (the “**Tort Claimants Committee**” and,
17 together with the Creditors Committee, the “**Committees**”).

18 Additional information regarding the circumstances leading to the commencement of the Chapter
19 11 Cases and information regarding the Debtors’ businesses and capital structure is set forth in the
20 *Amended Declaration of Jason P. Wells in Support of the First Day Motions and Related Relief* [Dkt.
21 No. 263] (the “**Wells Declaration**”).

22 On March 1, 2019, the Bankruptcy Court entered that certain *Amended Order Pursuant to 11*
23 *U.S.C. §§ 503(b)(9) and 105(a) Establishing Procedures for the Assertion, Resolution, and Satisfaction*
24 *of Claims Asserted Pursuant to 11 U.S.C. § 503(b)(9)* [Dkt. No. 725] (the “**503(b)(9) Procedures**
25 **Order**”), pursuant to which the Court established certain procedures (the “**503(b)(9) Procedures**”) to
26 govern the resolution of any 503(b)(9) Claims that may be asserted by Claimants against the Debtors.

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1 Pursuant to the 503(b)(9) Procedures, any Claimant asserting a 503(b)(9) Claim was required to
2 submit its 503(b)(9) Claim to Prime Clerk, LLC, the Debtors' claims and noticing agent, in the manner
3 set forth in the 503(b)(9) Procedures Order by no later than April 22, 2019 (the "**503(b)(9) Claim Filing**
4 **Deadline**"). As set forth on Exhibit A hereto, as of the date hereof, the Debtors have received
5 approximately six hundred and thirty-three (633) 503(b)(9) Claims, of which five hundred and thirty-six
6 (536) of the 503(b)(9) Claims were received or before the 503(b)(9) Claim Filing Deadline.¹

7 In accordance with the 503(b)(9) Procedures, after reviewing their books and records, the Debtors
8 have determined that certain of the 503(b)(9) Claims (or portions thereof) were made in accordance with
9 the requirements of the Bankruptcy Code and the 503(b)(9) Procedures and, are therefore, valid (the
10 "**Proposed Valid 503(b)(9) Claims**"). Accordingly, each such Proposed Valid 503(b)(9) Claim
11 identified on Exhibit A hereto shall be allowed as an administrative expense claim pursuant to section
12 503(b)(9) of the Bankruptcy Code and in accordance with the 503(b)(9) Procedures. In addition, after
13 reviewing their books and records, the Debtors have determined that certain of the 503(b)(9) Claims (or
14 portions thereof) identified on Exhibit A are invalid based on one or more of the following grounds and,
15 as a result, the Debtors are seeking to reclassify as general unsecured claims and/or disallow and expunge
16 in whole or in part such 503(b)(9) Claims:

17 ***Grounds for Reclassification (in whole or in part)²***

- 18 (i) amounts asserted in the 503(b)(9) Claim are on account of services or other non-
- 19 goods;
- 20 (ii) amounts asserted in the 503(b)(9) Claim are on account of goods delivered to the
- 21 Debtors outside of the 20-day period prior to the Petition Date;

22 ¹ Notwithstanding the passage of the 503(b)(9) Claim Filing Deadline, the Debtors continue as of the
23 date hereof, to receive 503(b)(9) Claims from various parties. Where applicable, the Debtors have noted
24 on Exhibit A any instance where a 503(b)(9) Claim was filed after the 503(b)(9) Claim Deadline. The
25 Debtors have not objected to, and are not seeking at this time to disallow or expunge any such late filed
26 503(b)(9) Claims, solely on the basis that such claims were not timely filed prior to the 503(b)(9) Claim
27 Filing Deadline; provided, however, the Debtors reserve the right to do so at a later date. The Debtors
28 continue to work with their advisors to reconcile the 503(b)(9) Claims that continue to be filed after the
503(b)(9) Claim Filing Deadline, and to the extent the Debtors have not resolved any outstanding
503(b)(9) Claims herein, the Debtors reserve the right to object to such claims in the future.

² The Debtors reserve the right to object in the future to any claims that may be reclassified as general unsecured claims.

Grounds for Disallowance/Expungement (in whole or in part)

- (i) the 503(b)(9) Claim contains insufficient information for the Debtors to establish or evaluate the basis of the claim;
- (ii) amounts asserted in the 503(b)(9) Claim do not match the Debtors' books and records;
- (iii) the 503(b)(9) Claim is duplicative of another 503(b)(9) Claim;
- (iv) the 503(b)(9) Claim has been amended and superseded by a subsequently filed claim;
- (v) the 503(b)(9) Claim was withdrawn by the Claimant;
- (vi) amounts asserted in the 503(b)(9) Claim were previously satisfied or paid by the Debtors.

In addition, certain Claimants have asserted 503(b)(9) Claims against the wrong Debtor. To the extent that a 503(b)(9) Claim asserts a claim against the wrong Debtor, the Debtors have reclassified such claim against the correct Debtor in accordance with the Debtors' books and records and, in certain instances, have objected to the reclassified claim on one or more of the bases set forth above.

Accordingly, the Debtors request that each of the 503(b)(9) Claims listed on Exhibit A (i) be allowed to the extent, and in the amount listed in the column labeled "Proposed Allowed 503(b)(9) Amount", (ii) be disallowed, to the extent, and in the amount, listed in the column labeled, "Proposed Amount Disallowed and Expunged", and (iii) be reclassified as general unsecured claims, to the extent, and in the amount listed in the column labeled, "Proposed Amount Reclassified as General Unsecured."

III. OBJECTION

Section 503(b)(9) of the Bankruptcy Code provides that:

(b) After notice and a hearing, there shall be allowed, administrative expenses, other than claims allowed under section 502(f) of this title, including . . . (9) the value of any goods received by the debtor within 20 days before the date of commencement of a case under [title 11] in which the goods have been sold to the debtor in the ordinary course of such debtor's business.

1 11 U.S.C. § 503(b)(9). Each of the requirements of section 503(b)(9) and the various grounds for which
2 the Debtors are seeking to reclassify, disallow, and/or expunge certain of the 503(b)(9) Claims pursuant
3 to this Objection are discussed in further detail below.

4 **Deliverance of Goods.** By its express terms, section 503(b)(9) applies only to the receipt of
5 goods. See *In re Brown & Cole Stores, LLC*, 375 B.R. 873, 878 n. 7 (9th B.A.P. 2007) (“By the plain
6 terms of the statute. . . the vendor must have provided goods (not services).”). Courts generally define
7 “goods” in accordance with section 2-105 of the Uniform Commercial Code (the “UCC”). See, e.g.,
8 *Gross v. Symantec Corp.*, 2012 WL 3116158, *9 (Bankr. N.D.Cal. 2012) (The California UCC defines
9 “goods” as “all things (including specially manufactured goods) which are movable at the time of
10 identification to the contract for sale....” Cal. Com.Code § 2105.”); *In re Circuit City Stores, Inc.*, 416
11 B.R. 531 (Bankr. E.D. Va. 2009) ([T]he word “goods” in § 503(b)(9) should be defined the same way
12 as “goods” is defined in §546(c); *In re GIC Gov’t Sec.*, 64 B.R. 161, 162 (Bankr. M.D. Fla. 1986) (“Based
13 on § 546(c)’s purpose and origins, this should be the UCC definition.”); *In re NE Opco, Inc.*, 501 B.R.
14 233 (2013) (finding amount attributable to the goods is provided administrative priority status and the
15 amount attributable to services is not); *In re Plastech Engineered Prods., Inc.*, 397 B.R. 828, 837-38
16 (Bankr. E.D. Mich. 2009) (finding where the value of services and goods could be differentiated that
17 503(b)(9) status would be granted for the value of the goods only). In certain instances, Claimants have
18 included the asserted value of non-goods as a part of their 503(b)(9) Claims including, without limitation,
19 amounts asserted for contingent litigation claims, services, resource adequacy and dispatch rights, energy
20 curtailment, customer access charges, freight and handling charges or fees, taxes, and insurance.
21 Accordingly, a 503(b)(9) Claim is invalid and should be disallowed to the extent it includes services or
22 other nontangible items rather than goods.

23 **503(b)(9) Period.** Section 503(b)(9) requires that the Claimant must have delivered the goods in
24 question to the Debtors in the ordinary course of business and within twenty days prior to the
25 commencement of the chapter 11 filing. *In re Brown & Cole Stores, LLC*, 375 B.R. at 878 n. 7. A
26 Claimant has no right to assert a 503(b)(9) Claim for goods delivered to the Debtors outside of the 20-
27 day period (*i.e.*, earlier than January 9, 2019 or later than January 28, 2019) (the “**503(b)(9) Period**”).
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1 Accordingly, a 503(b)(9) Claim is invalid to the extent that it asserts a claim for goods that were delivered
2 to the Debtors on a date falling outside of the 503(b)(9) Period.

3 **Insufficient Information.** A number of 503(b)(9) Claims submitted to the Debtors contained
4 insufficient information for the Debtors to establish the basis for, or evaluate the validity of, such claims.
5 The 503(b)(9) Procedures Order requires each Claimant asserting a 503(b)(9) Claim to deliver a proof
6 of claim prior to the 503(b)(9) Claim Filing Deadline (a “**Proof of 503(b)(9) Claim Form**”) that sets
7 forth, to the extent such information is already available or known to such Claimant, (i) the value of the
8 Goods the Claimant contends the Debtors received within twenty (20) days prior to the Petition Date;
9 (ii) documentation, including invoices, receipts, bills of lading, and the like, identifying the particular
10 Goods for which the claim is being asserted; (iii) documentation regarding which Debtor the Goods were
11 shipped to, the date the Goods were received by such Debtor, and the alleged value of such Goods; and
12 (iv) a statement indicating (I) whether the value of such Goods listed in the Proof of 503(b)(9) Claim
13 represents a combination of services and Goods, (II) the percentage of value related to services and
14 related to Goods, and (III) whether the Claimant has filed any other claim against any Debtor regarding
15 the Goods underlying its Proof of 503(b)(9) Claim Form. Certain Claimants failed to include this
16 information in their 503(b)(9) Claim Forms and, after a review of the Debtors’ books and records, the
17 Debtors are not able to identify the bases of such claims or verify the amounts listed in such Claimants’
18 503(b)(9) Claim Forms. In instances where this applies, the Debtors or their advisors have attempted to
19 reach out to the Claimants to request additional information before filing this Objection. To date,
20 sufficient additional information has not been provided by any such Claimants. Consequently, the
21 503(b)(9) Claims (or portions thereof) that failed to include sufficient information for the Debtors to
22 establish the basis for, or evaluate the validity of, the 503(b)(9) Claims should be disallowed and
23 expunged.

24 **Books and Records.** There are a number of 503(b)(9) Claims on **Exhibit A** where the claim
25 amount asserted by the Claimant differs from the amounts that the Debtors have recorded in their books
26 and records as owed to the Claimant. In these instances, the Debtors dispute the amount of the 503(b)(9)
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28

1 Claim and request that the Court allow such claim only in the amounts reflected in the Debtors' books
2 and records.

3 **Duplicate Claims.** Certain Claimants have asserted multiple identical 503(b)(9) Claims against
4 the same or alternative Debtors. To the extent that a 503(b)(9) Claim duplicates another 503(b)(9) Claim,
5 such duplicate 503(b)(9) Claims should be disallowed and expunged.

6 **Amended Claims.** Certain Claimants have amended their 503(b)(9) Claims (the "**Amended**
7 **503(b)(9) Claims**"). In these instances, the Debtors have reconciled the Amended 503(b)(9) Claim in
8 lieu of the original 503(b)(9) Claim. To the extent that a 503(b)(9) Claim has been amended, the
9 Amended 503(b)(9) Claim supersedes the original 503(b)(9) Claim, and the original 503(b)(9) Claim
10 should be disallowed and expunged.

11 **Withdrawn Claims.** Certain Claimants have subsequently withdrawn their claims. To the extent
12 a 503(b)(9) Claim has been withdrawn, the 503(b)(9) Claim should be disallowed and expunged.

13 **Satisfied Claims.** Certain 503(b)(9) Claims have already been satisfied or paid by the Debtors –
14 this includes amounts that were satisfied prepetition, satisfied as ordinary course postpetition obligations,
15 or satisfied pursuant to prior Orders of the Court.³ To avoid the situation where a Claimant may be
16 receiving a double recovery on account of its claim, each of the satisfied 503(b)(9) Claims should be
17 disallowed. In addition, certain Claimants have also filed written demands asserting reclamation claims
18 (each a "**Reclamation Demand**") that may be satisfied in accordance with the *Order Pursuant to 11*
19 *U.S.C. §§ 546(c) and 105(a) and Fed. R. Bankr. P. 9019 Establishing and Implementing Exclusive and*
20 *Global Procedures for the Treatment of Reclamation Claims* [Dkt. No. 699] (the "**Reclamation**
21 **Procedures Order**"). To the extent that a 503(b)(9) Claim duplicates a Reclamation Demand that has
22

23 ³ Such prior Orders of the Court include, without limitation, that certain *Final Order Pursuant to 11*
24 *U.S.C. §§ 105(a), 363(b), and 503(b)(9) and Fed. R. Bankr. P. 6003 and 6004 Authorizing Debtors to*
25 *Pay Prepetition Obligations Owed to Certain Safety and Reliability, Outage, and Nuclear Facility*
26 *Suppliers* [Dkt. No. 883], *Final Order Pursuant to 11 U.S.C. §§ 105(a), 363(b), 507(a), and 541 and*
27 *Fed. R. Bankr. P. 6003 and 6004 Authorizing Debtors to Pay Prepetition Taxes and Assessments and*
28 *Granting Related Relief* [Dkt. No. 698]; *Final Order Pursuant to 11 U.S.C. §§ 105, 362, 363, and 364*
and Fed. R. Bankr. P. 6003 and 6004 Authorizing Debtors to (A) Honor Prepetition Obligations to
Natural Gas and Electricity Exchange Operators, (B) Grant Administrative Expense Claims and
Authorize Posting of Collateral to Exchange Operators, Trading Counterparties, and Future
Commission Merchants, (C) Modify the Automatic Stay, and (D) Grant Related Relief [Dkt. No. 696].

1 been allowed as an administrative expense claim pursuant to the Reclamation Procedures Order, such
2 duplicate 503(b)(9) Claims should be disallowed and expunged.

3 Accordingly, for the reasons set forth above, the Debtors request that each of the 503(b)(9)
4 Claims listed on Exhibit A (i) be allowed to the extent, and in the amount listed in the column labeled
5 "Proposed Allowed 503(b)(9) Amount", (ii) be disallowed, to the extent, and in the amount, listed in
6 the column labeled, "Proposed Amount Disallowed and Expunged", and (iii) be reclassified as general
7 unsecured claims, to the extent, and in the amount listed in the column labeled, "Proposed Amount
8 Reclassified as General Unsecured."

9 **IV. RESERVATION OF RIGHTS**

10 The Debtors continue to review their books and records and hereby reserve the right to object in
11 the future to any of the 503(b)(9) Claims listed in this Objection or Exhibit A attached hereto (or any
12 other asserted 503(b)(9) Claims) on any ground, and to amend, modify, and/or supplement this
13 Objection, including, without limitation, to object to amended or newly-filed claims. A separate notice
14 and hearing will be scheduled for any such objection.

15 **V. NOTICE**

16 Notice of this Objection will be provided to (i) the Office of the United States Trustee for Region
17 17 (Attn: Andrew R. Vara, Esq. and Timothy Laffredi, Esq.); (ii) counsel to the Creditors Committee;
18 (iii) counsel to the Tort Claimants Committee; (iv) Counsel to the Engineers and Scientists of California
19 Local 20; (v) the Securities and Exchange Commission; (vi) the Internal Revenue Service; (vii) the
20 Office of the California Attorney General; (viii) the California Public Utilities Commission; (ix) the
21 Nuclear Regulatory Commission; (x) the Federal Energy Regulatory Commission; (xi) the Office of the
22 United States Attorney for the Northern District of California; (xii) counsel for the agent under the
23 Debtors' debtor in possession financing facility; (xiii) each of the Claimants; and (xiv) those persons
24 who have formally appeared in these Chapter 11 Cases and requested service pursuant to Bankruptcy
25 Rule 2002. The Debtors respectfully submit that no further notice is required. No previous request for
26 the relief sought herein has been made by the Debtors to this or any other Court.
27
28

1 WHEREFORE the Debtors respectfully request entry of an Order granting the relief
2 requested herein and such other and further relief as the Court may deem just and appropriate.
3

4 Dated: July 8, 2019

WEIL, GOTSHAL & MANGES LLP

KELLER & BENVENUTTI LLP

By: /s/Matthew Goren
Matthew Goren

*Attorneys for Debtors
and Debtors in Possession*

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Weil, Gotshal & Manges LLP
767 Fifth Avenue
New York, NY 10153-0119

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EXHIBIT A
Proposed 503(b)(9) Claims Treatment

Weil, Gotshal & Manges LLP
767 Fifth Avenue
New York, NY 10153-0119

Exhibit A

Claim Number	Creditor Name	Asserted Debtor	Allowed Debtor	Asserted 503(b)(9) Amount	Proposed Amount Disallowed and Expunged	Proposed Amount Reclassified as General Unsecured	Reason for Proposed Disallowance and/or Reclassification
3257	Hain Capital Investors Master Fund, Ltd as Transferee of VP Hauling & Demolition	PG&E Corporation	Pacific Gas and Electric Company	\$ 152,051.00	\$ -	\$ 152,051.00	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods. Claim was incorrectly asserted against PG&E Corporation. The claim has been reassigned to Pacific Gas and Electric Company. Claim asserted after the 503(b)(9) Filing Deadline.
1381	HAT CREEK HEREFORD RANCH POWER	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 1,256.71	\$ 875.12	\$ -	<ul style="list-style-type: none"> Claim partially reclassified as general unsecured claim because claim amount asserted includes (i) amounts for services and other non-goods; and (ii) amounts that do not represent goods delivered in the 20 days prior to the Petition Date.
2013	Hat Creek Hereford Ranch Power Co	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 1,529.70	\$ -	\$ -	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts that do not represent goods delivered in the 20 days prior to the Petition Date.
2564	Hatchet Ridge Wind, LLC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 1,748,462.69	\$ 1,748,462.69	\$ -	<ul style="list-style-type: none"> Claim allowed as asserted.
2204	HBR Consulting LLC	PG&E Corporation	Pacific Gas and Electric Company	\$ 5,750.00	\$ -	\$ 5,750.00	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods. Claim was incorrectly asserted against PG&E Corporation. The claim has been reassigned to Pacific Gas and Electric Company.
2154	HEARTWOOD STUDIOS INC	PG&E Corporation	N/A	\$ 63,975.00	\$ -	\$ 63,975.00	<ul style="list-style-type: none"> Claim asserted against wrong debtor and is duplicative of claim #2299.
2299	HEARTWOOD STUDIOS INC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 63,975.00	\$ -	\$ 63,975.00	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods.
1557	HID Global Safe, Inc (FKA, Quantum Secure Inc.)	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 21,438.00	\$ -	\$ -	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes (i) amounts for services and other non-goods; and (ii) amounts that do not represent goods delivered in the 20 days prior to the Petition Date.
1424	High Bridge Associates, Inc.	Pacific Gas and Electric Company	N/A	\$ 181,250.29	\$ -	\$ 181,250.29	<ul style="list-style-type: none"> Claim disallowed and expunged because claim was previously withdrawn by the claimant.
2024	High Plains Ranch II, LLC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 1,943,784.65	\$ 1,943,784.65	\$ -	<ul style="list-style-type: none"> Claim allowed as asserted.
2023	High Plains Ranch II, LLC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 378,942.84	\$ 378,942.84	\$ -	<ul style="list-style-type: none"> Claim allowed as asserted.
1410	Highway 58 LLC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 1,512.00	\$ -	\$ -	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods.
2836	Hillside Electric	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 4,047.18	\$ 1,547.18	\$ -	<ul style="list-style-type: none"> Claim partially reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods. Claim asserted after the 503(b)(9) Filing Deadline.
1544	HIS Global Inc	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 21,540.32	\$ -	\$ -	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods.
2597	Hollister Solar LLC	Pacific Gas and Electric Company	N/A	\$ 9,975.60	\$ -	\$ 9,975.60	<ul style="list-style-type: none"> Claim disallowed and expunged because claim is duplicative of claim #2635.
2635	Hollister Solar LLC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 9,975.60	\$ 9,975.60	\$ -	<ul style="list-style-type: none"> Claim allowed as asserted.
1860	HOLT OF CALIFORNIA	PG&E Corporation	N/A	\$ 70,143.28	\$ -	\$ 70,143.28	<ul style="list-style-type: none"> Claim disallowed and expunged because claim was previously withdrawn by the claimant.
2148	Humboldt Bay Municipal Water District	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 77,135.03	\$ 57,329.60	\$ -	<ul style="list-style-type: none"> Claim partially reclassified as general unsecured claim because claim amount asserted includes amounts that do not represent goods delivered in the 20 days prior to the Petition Date.
2638	Huyhn, Lion	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 5,000.00	\$ -	\$ 5,000.00	<ul style="list-style-type: none"> Claim reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods.
1386	Hypower, Inc.	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 72,092.92	\$ 65,298.78	\$ -	<ul style="list-style-type: none"> Claim partially reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods.
2583	Hyundai Corporation USA	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 1,142,294.00	\$ 884,848.00	\$ -	<ul style="list-style-type: none"> Claim partially reclassified as general unsecured claim because claim amount asserted includes amounts for services and other non-goods.
2385	IGNITE SOLAR, LLC	Pacific Gas and Electric Company	Pacific Gas and Electric Company	\$ 15,115.26	\$ 15,115.26	\$ -	<ul style="list-style-type: none"> Claim partially reclassified as general unsecured claim because claim amount asserted includes (i) amounts for services and other non-goods; and (ii) amounts for freight and/or taxes. Claim allowed as asserted.

New Business

Humboldt Bay Municipal Water District

To: Board of Directors

From: John Friedenbach

Date: August 1, 2019

Re: Hydro Electric Operator / Ruth Area Representative Trainee Position Authorization

Discussion

As you are aware, one of our employee positions is the Hydroelectric Operator / Ruth Area Representative. Management has been informed that our current employee in this position will be retiring from the District soon. The exact date has not been specified. Attached for your reference is a copy of the job description from our Employee Handbook for this position. As you can see, these job duties are complex and critical to the operation of our District's reservoir, hydroelectric plant, and property management around Ruth Lake.

Our current employee has been in this position for 24 years and total employment of 37 years with the District. Given this longevity and expansive job duties required for this position, staff is requesting an extended trainee timeframe for a replacement. Specifically, staff is requesting that the Board authorize a trainee position for up to six months. It is likely that we will not be afforded that much time, but if available, it is staff's opinion that an extended training time is necessary for this critical operational position.

Transition Process

For whatever duration of time the Board authorizes for the trainee, staff will utilize the following process. The selected trainee will reside in the Davidsen Cabin at Ruth except for the times where District Maintenance Staff will be using the cabin for Ruth maintenance projects. There are several weeks of maintenance projects currently scheduled for August and September. During these times the trainee will be housed at Journey's End. The trainee will utilize the District's Ford Explorer on a temporary basis.

If an existing District employee is selected as the trainee, staff will walk the Board through the ramifications on our personnel organization chart. We will use the attached Org. Chart for that discussion. Staff will notify the Board when a definitive notice of retirement is received from the current Hydro Electric Operator / Ruth Area Representative.

Recommendation and Action

Staff requests the Board authorize a temporary Hydroelectric Operator / Ruth Area Representative trainee position for up to six months or until such time as the current Hydroelectric Operator / Ruth Area Representative retires, if sooner. The budget allocation will be \$13,300 per month including wages and benefits. The budget impact of this will be discussed further during the Board meeting. The trainee will be authorized to utilize the District's Ford Explorer while in the trainee position.

Humboldt Bay Municipal Water District**HYDROELECTRIC OPERATOR/RUTH-AREA REPRESENTATIVE – OM3****GENERAL PURPOSE**

Under general supervision, operates, maintains, and controls the District's hydroelectric generating facilities, R.W. Matthews Dam and reservoir equipment, and Ruth Lake facilities; acts as District's on-site Ruth area representative; and performs other related duties as required.

ESSENTIAL FUNCTIONS AND DUTIES

1. Controls the operation of hydroelectric generation, R.W. Matthews Dam, reservoir, and water release equipment and facilities at Ruth Lake using established operating parameters.
2. Reads and records voltage level and kilowatt hour production of hydroelectric plant; reads gauges and flow meters to determine and record water levels and flow rates; reports data and plant conditions to other staff.
3. Stops and starts power plant following established procedures; checks annunciators, gauges, and dials to assess plant conditions; checks equipment for malfunctions of maintenance needs.
4. Performs needed maintenance and repair on District facilities; keeps machinery, equipment, structures, piping, work areas, grounds, and landscaped areas in a clean and orderly condition; assists others with complex machinery and equipment maintenance, repair, and overhaul.
5. Inspects control equipment, facilities, and grounds for needed maintenance and repairs and unusual operating conditions.
6. Operates vehicles and equipment; prepares a variety of operating reports; makes rounds of District property to secure facilities and ensure safety.
7. Oversee the work of other staff assigned to assist in the operation and maintenance of District equipment, R.W. Matthews Dam, and facilities at Ruth Lake.
8. Acts as District representative to public agencies, lessees of District properties, and the general public; assures that the development and usage of District real property complies with District requirements.
9. Responds to hydroelectric plant alarms and emergencies; performs powerhouse and R.W. Matthews Dam inspections in the event of an earthquake; coordinates the Emergency Action Plan activities at Ruth Lake.
10. Make visual observations of dam, abutments and surrounding geology per our Dam Safety and Surveillance Monitoring Plan (DSSMP).

REQUIRED KNOWLEDGE, SKILLS, and ABILITIES

- Principles and practices of dams, penstocks, and hydroelectric plants, including electrical generators, turbines, high voltage breakers, transformers, compressors, valves, pumps
- Hydro-electric facility operations, including monitoring, controlling and adjusting operations and output
- Reservoir capacity, water flow, and electric generation calculations
- Repair and maintenance procedures for hydroelectric plants, dams, and related equipment

- Planning and overseeing construction and maintenance work conducted by third-party contractors
- Basic water sample collection and laboratory testing procedures
- Basic operation of computers, automated equipment, and standard applications software
- Safe work practices and safety regulations
- Public and media relations
- Cooperative working relationships. Teamwork to solve practical problems and coordinate work among a small, close-knit workforce.

TRAINING AND EXPERIENCE

Any combination of training and experience that provides the required knowledge and abilities is qualifying. A typical way to obtain the requisite knowledge and abilities would be:

- High school diploma or GED
- Community College, technical or other course work relevant for this position beneficial
- Three-to-five years of increasingly responsible experience in the operation and maintenance of hydroelectric generation, dams, and reservoir facilities; or three-to-five years of experience in skilled industrial plant mechanical maintenance and repair, preferably with some direct experience at a water facility.
- Grade II Treatment and/or Distribution certificates

SPECIAL REQUIREMENTS

1. Must possess the category of California Driver's license required by the State Department of Motor Vehicles to perform the essential duties of the position. Job incumbents must maintain a driving record acceptable to the District and its insurance carrier. Compliance with these requirements and established District vehicle operation standards are a condition of continuing employment.
2. May work odd shifts, weekends, or holidays and perform standby duties as assigned. Must be available to respond to emergencies which affect the District such as earthquakes, power outages, , and high water events.
3. In order to wear respiratory protection or other safety equipment, facial hair must be maintained as to keep hair growth out from between the skin and the facepiece sealing surface(such as stubble beard growth, beard, mustache or sideburns)..
4. Must be able to participate in confined space operations.
5. Must possess and maintain a Grade II Water Treatment Operator's Certificate and a Grade II Water Distribution Certificate pursuant to State drinking water regulations. If an incumbent does not initially possess this level of certification, the District will allow a period of time for the incumbent to obtain the required certifications. Job incumbents must also meet the State's continuing education requirements to maintain certifications. Compliance with the State certification requirements is a condition of continuing employment.
6. Must acquire basic American Red Cross First Aid/CPR certificates during the initial year of employment.

ESSENTIAL PHYSICAL ABILITIES

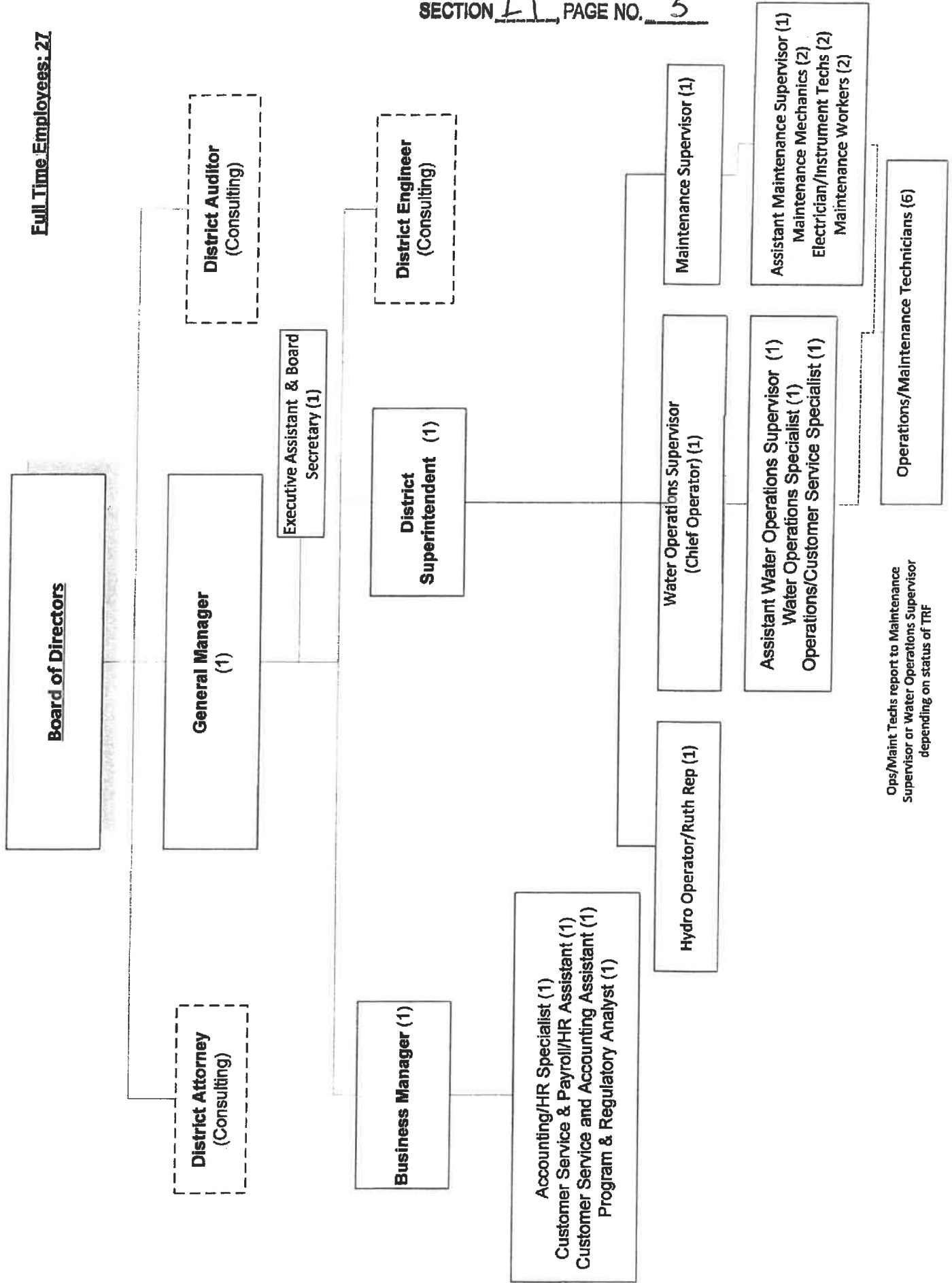
Persons selected for appointment to this position must pass a pre-employment medical examination which the District pays for. Because this position is considered "safety sensitive" in nature, the person selected for appointment to this position must pass a pre-employment drug screening which the District also pays for. The medical examination and drug screening is intended to evaluate the applicant's ability to meet the physical and health requirements for this classification.

A person employed in this position must be able to:

- a) Sit for extended periods of time;
- b) Operate a desktop computer;
- c) Operate motor vehicles and other equipment;
- d) Operate a variety of hand and electric tools;
- e) Perform a variety of physical activities which may involve reaching, bending, squatting, kneeling, crouching, crawling, and climbing, and also manual dexterity;
- f) Perform additional physical activities to position or move tools, equipment, and supplies which may involve lifting, and pushing or pulling motions;
- g) Wear a respirator and other personal protective equipment;
- h) Understand and carry out oral and written directions;
- i) Communicate well with others, verbally and in writing;
- j) Work cooperatively and get along well with other people;
- k) Investigate and solve complex problems which involves ability to perform visual inspections, ability to hear normal versus abnormal noises, ability to view and respond to operational control screens including alarms, and ability to think critically.

Humboldt Bay Municipal Water District

Full Time Employees: 27



Ops/Maint Techs report to Maintenance Supervisor or Water Operations Supervisor depending on status of TRF

Engineering

FILE COPY

SECTION 51a, PAGE NO. 1

2019-012583

For the benefit of Humboldt Bay Municipal Water District
Exempt from Recording Fees
GC 27383

Recorded - Official Records
Humboldt County, California
Kelly E. Sanders, Recorder
Recorded by: HUMBOLDT BAY MUNICIPAL WATER

Pages: 1

Recording Fee: \$ 0.00
Tax Fee: \$0
Clerk: kt Total: \$0.00
Jul 22, 2019 at 01:23:47

*** CONFORMED COPY ***

Return to:
Humboldt Bay Municipal Water District
828 7th Street
Eureka, CA 95501-1114

NOTICE OF COMPLETION

NOTICE is hereby given that the undersigned, John Friedenbach, General Manager of the Humboldt Bay Municipal Water District (HBMWD), 828 Seventh Street, Eureka, CA 95501, the owner of the improvements situated in the County of Humboldt, State of California, and described as follows, to wit:

Construction of the HBMWD Surge Tower Demolition Project on the Samoa Peninsula is complete. Work included the furnishing of all labor, materials, equipment, and supervision for the demolition and removal of the District's industrial water line surge tower and appurtenances, capping the opening that remained in the existing concrete base after surge tower demolition, and capping the surge tower overflow pipe at the ground surface.

That Humboldt Bay Municipal Water District as the owner of the improvements in fee did enter into a contract with Figas Construction for the construction of:


HBMWD Surge Tower Demolition Project

That on July 12, 2019 the said contract, as a whole, was actually completed by Figas Construction.

The name and address of the owner of said improvements is as follows:

Humboldt Bay Municipal Water District
Assessor's Parcel Number (APN): 401-112-021

Humboldt Bay Municipal Water District

BY  General Manager
John Friedenbach
General Manager

Verification for NON-INDIVIDUAL owner: I, the undersigned, declare under penalty of perjury under the laws of the State of California that I am the General Manager of the aforesaid interest or estate in the property described in the above notice; that I have read the said notice, that I know and understand the contents thereof, and that the facts stated therein are true and correct.

July 22, 2019 Eureka, CA
Date and Place


(John Friedenbach, General Manager)

Notice of Exemption

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: Humboldt

From: (Public Agency): _____
Humboldt Bay Municipal Water District
828 7th Street, Eureka CA 95501

(Address)
office @ hbmwd.com

Project Title: 12-kV Switchgear Relocation Project

Project Applicant: Humboldt Bay Municipal Water District (HBMWD)

Project Location - Specific:
The project is located at HBMWD's main operations center in the community of Essex, located approximately one mile east of the city of Arcata. The project is specifically located at 7352 West End Road, Arcata CA.

Project Location - City: Arcata Project Location - County: Humboldt

Description of Nature, Purpose and Beneficiaries of Project:
See attached sheet for information on the nature, purpose and beneficiaries of the Project.

Name of Public Agency Approving Project: Humboldt County

Name of Person or Agency Carrying Out Project: HBMWD

Exempt Status: (check one):

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(a));
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- Categorical Exemption. State type and section number: Section 15302, 15303 and 15304
- Statutory Exemptions. State code number: _____

Reasons why project is exempt:
See attached sheet for information on why the Project is exempt.

Lead Agency
Contact Person: John Friedenbach Area Code/Telephone/Extension: (707) 443-5018

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No

Signature: *John Friedenbach* Date: 7/24/19 Title: General Manager
 Signed by Lead Agency Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

12-2019-271

Recorded - Official Records
Humboldt County, California
Kelly E. Sanders, Recorder
Recorded by:

Pages: 2

Recording Fee: \$ 50.00
Tax Fee: \$0.00
Clerk: sc Total: \$50.00
Jul 26, 2019 at 09:29:40

*** CONFORMED COPY ***

FINANCIAL

Humboldt Bay Municipal Water District

Memo to: Board of Directors

From: Chris Harris, Business Manager
Becky Moyle, Accounting & Human Resources Specialist

Date: August 2, 2019

Subject: Financial Report for July 2019

The Financial Report for July 2019 was not completed by the BlueBook publish date. We expect to have the Financial Report completed next week and will email it to you as soon as it is completed. Please let me know if you would like a paper copy delivered to you.

The Monthly Expenses by Vendor Detail report is in the BlueBook.

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 1
Aug 02, 2019 09:17AM

Vendor Name	Date Paid	Description	Amount Paid
101 Netlink			
101 Netlink	07/09/2019	Ruth Data Link/Internet	160.00
Total 101 Netlink:			160.00
ACWA/JPIA			
ACWA/JPIA	07/30/2019	Property Program 7/1/19-6/30/2020 General District	16,476.39
ACWA/JPIA	07/30/2019	Property Program 7/1/19 - 6/30/2020 - Hydro Plant	3,030.64
ACWA/JPIA	07/30/2019	Property Program 4/1/19 - 6/30/2020 - TRF	9,867.67
ACWA/JPIA	07/19/2019	RETIREE MEDICAL	11,353.02
ACWA/JPIA	07/19/2019	COBRA Dental	33.72
ACWA/JPIA	07/19/2019	COBRA Vision	18.56
ACWA/JPIA	07/22/2019	Workers Compensation April - June 2019	20,311.40
Total ACWA/JPIA:			61,091.40
Advanced Security Systems			
Advanced Security Systems	07/09/2019	Eureka office Quarterly Alarm System Monitoring	159.96
Advanced Security Systems	07/09/2019	Essex office Quarterly Alarm System Monitoring	356.46
Total Advanced Security Systems:			516.42
AirGas NCN			
AirGas NCN	07/31/2019	Ruth Hydro Oil and Paint Storage Lockers	799.65
AirGas NCN	07/09/2019	Ruth Hydro Oil and Paint Storage Lockers	978.71
Total AirGas NCN:			1,778.36
Almquist Lumber			
Almquist Lumber	07/30/2019	paint and painting supplies	544.72
Total Almquist Lumber:			544.72
Altec Industries, Inc			
Altec Industries, Inc	07/30/2019	Altec chipper maintenance	363.90
Total Altec Industries, Inc:			363.90
Arcata Stationers			
Arcata Stationers	07/30/2019	Essex office supplies	42.29
Arcata Stationers	07/30/2019	Essex office supplies	64.45
Total Arcata Stationers:			106.74
AT & T			
AT & T	07/22/2019	Eureka/Essex Land Line	35.05
AT & T	07/22/2019	Arcata/Essex Land Line	35.05
AT & T	07/22/2019	Samoa/Essex Land Line	235.02
AT & T	07/22/2019	Blue Lake Meter Signal Line	60.53
AT & T	07/22/2019	Eureka Office/Modem	196.35
AT & T	07/22/2019	Eureka Office Alarm Line	110.55
AT & T	07/22/2019	Samoa Booster Pump Station	111.47
AT & T	07/22/2019	Valve Building Samoa	196.34
AT & T	07/22/2019	Eureka Office	449.31
AT & T	07/22/2019	Essex office	1,185.85
AT & T	07/22/2019	TRF	191.43
AT & T	07/22/2019	Ruth Hydro/Dataline	190.56

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 2
Aug 02, 2019 09:17AM

Vendor Name	Date Paid	Description	Amount Paid
Total AT & T:			2,997.51
AT&T Advertising Solutions			
AT&T Advertising Solutions	07/30/2019	white page listing	21.00
Total AT&T Advertising Solutions:			21.00
AT&T Long Distance			
AT&T Long Distance	07/22/2019	Eureka Office Long Distance	39.84
AT&T Long Distance	07/22/2019	Ruth HQ	29.43
AT&T Long Distance	07/22/2019	Essex Control Long Distance	106.20
AT&T Long Distance	07/22/2019	Essex Water Quality Long Distance	8.07
AT&T Long Distance	07/22/2019	Essex Office Long Distance	333.00
AT&T Long Distance	07/22/2019	Eureka Office Long Distance	6.97
AT&T Long Distance	07/22/2019	Ruth Hydro/Dataline Long Distance	250.80
Total AT&T Long Distance:			774.31
Citi Cards			
Citi Cards	07/30/2019	Eureka office supplies	58.56
Total Citi Cards:			58.56
City of Eureka			
City of Eureka	07/09/2019	Eureka office water/sewer	103.28
Total City of Eureka:			103.28
Coast Counties Truck & Equipment Company			
Coast Counties Truck & Equipment Compan	07/30/2019	Unit 5 maintenance	426.77
Total Coast Counties Truck & Equipment Company:			426.77
Coastal Business Systems Inc.			
Coastal Business Systems Inc.	07/22/2019	Eureka office copy and fax machine	940.53
Total Coastal Business Systems Inc.:			940.53
Coastal Tree Service			
Coastal Tree Service	07/10/2019	Hazardous Tree Removal - Park 4	4,642.25
Coastal Tree Service	07/10/2019	Hazardous Tree Removal - TRF	1,610.00
Coastal Tree Service	07/10/2019	Hazardous Tree Removal - Park14	1,497.50
Total Coastal Tree Service:			7,749.75
Corey Borghino			
Corey Borghino	07/09/2019	auto mileage reimbursement	61.36
Total Corey Borghino:			61.36
Dave Perkins			
Dave Perkins	07/31/2019	auto mileage reimbursement	168.78
Dave Perkins	07/31/2019	auto mileage reimbursement	10.67
Total Dave Perkins:			179.45

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 3
Aug 02, 2019 09:17AM

Vendor Name	Date Paid	Description	Amount Paid
ESRI, Inc			
ESRI, Inc	07/30/2019	Annual GIS Software Maintenance Support for Essex Office	4,200.00
Total ESRI, Inc:			4,200.00
Eureka Oxygen			
Eureka Oxygen	07/22/2019	cylinder rental	108.20
Total Eureka Oxygen:			108.20
Eureka Readymix			
Eureka Readymix	07/30/2019	Emergency Generator for Communications Equip @ Ind Meter	339.42
Total Eureka Readymix:			339.42
Eureka-Humboldt Fire Ext.,Co, Inc			
Eureka-Humboldt Fire Ext.,Co, Inc	07/30/2019	Essex Fire Extinguisher maintenance	1,033.34
Eureka-Humboldt Fire Ext.,Co, Inc	07/30/2019	TRF Fire Extinguisher Service	135.00
Eureka-Humboldt Fire Ext.,Co, Inc	07/30/2019	Fieldbrook-Glendale CSD Fire Extinguisher Service	30.00
Total Eureka-Humboldt Fire Ext.,Co, Inc:			1,198.34
Fastenal Company			
Fastenal Company	07/30/2019	Collector 1 Transformer Maintenance	36.40
Fastenal Company	07/30/2019	maintenance supplies	77.82
Fastenal Company	07/22/2019	safety supplies	90.60
Total Fastenal Company:			204.82
Ferguson Waterworks			
Ferguson Waterworks	07/30/2019	Fieldbrook-Glendale CSD Meters	335.72
Total Ferguson Waterworks:			335.72
Figas Construction			
Figas Construction	07/23/2019	Progress Payment 1 - Surge Tower Replacement	62,367.50
Total Figas Construction:			62,367.50
FleetPride			
FleetPride	07/30/2019	Unit 5 Repairs	188.74
Total FleetPride:			188.74
Friends of the Dunes			
Friends of the Dunes	07/30/2019	Coastal Conservancy Climate Ready Grant for Coastal Dune Vu	2,000.00
Total Friends of the Dunes:			2,000.00
Frontier Communications			
Frontier Communications	07/30/2019	Ruth HQ	54.73
Frontier Communications	07/30/2019	Ruth Hydro/Ruth Dataline	171.26
Total Frontier Communications:			225.99
GEI Consultants, Inc			
GEI Consultants, Inc	07/09/2019	FERC Dam Safety Engineer	550.00

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 4
Aug 02, 2019 09:17AM

Vendor Name	Date Paid	Description	Amount Paid
Total GEI Consultants, Inc:			550.00
GHD			
GHD	07/31/2019	Surge Tower Replacement	2,041.50
GHD	07/31/2019	Grant Assistance - TRF Generator	6,541.00
Total GHD:			8,582.50
H.T. Harvey & Associates			
H.T. Harvey & Associates	07/09/2019	Assistance with Streambed Flow Enhancement - Grant	26,271.25
H.T. Harvey & Associates	07/30/2019	Assistance with Streambed Flow Enhancement - Grant	6,984.25
Total H.T. Harvey & Associates:			33,255.50
Hach Company			
Hach Company	07/30/2019	Lab supplies	448.91
Total Hach Company:			448.91
Harbor Freight Tools			
Harbor Freight Tools	07/30/2019	maintenance supplies	33.58
Total Harbor Freight Tools:			33.58
Health Equity Inc			
Health Equity Inc	07/19/2019	District HSA Contributions - 4 employees	78.48
Health Equity Inc	07/09/2019	HSA Admin Fee 9 employees	26.55
Health Equity Inc	07/09/2019	HSA Admin Fee - 2 employees	5.90
Total Health Equity Inc:			110.93
Hensel Hardware			
Hensel Hardware	07/31/2019	maintenance supplies	43.37
Hensel Hardware	07/31/2019	Collector pump oiler project	21.68
Hensel Hardware	07/31/2019	maintenance supplies	41.55
Hensel Hardware	07/31/2019	maintenance supplies	66.14
Hensel Hardware	07/31/2019	TRF Pretreat System Piping Maintenance	33.60
Hensel Hardware	07/31/2019	Fittings for Collector Pump Oilers	9.96
Hensel Hardware	07/31/2019	maintenance supplies	45.54
Hensel Hardware	07/31/2019	Park 1 Fence Repair	56.54
Hensel Hardware	07/31/2019	TRF Pretreat System Piping Maintenance	41.95
Total Hensel Hardware:			360.33
Henwood Associates, Inc			
Henwood Associates, Inc	07/09/2019	Consultant Services Agreement	1,889.67
Total Henwood Associates, Inc:			1,889.67
Humboldt County Clerk-Recorder			
Humboldt County Clerk-Recorder	07/24/2019	Notice of Exemption - CEQA Cat Exemption 12kV Switchgear	50.00
Total Humboldt County Clerk-Recorder:			50.00
Humboldt County Treasurer			
Humboldt County Treasurer	07/09/2019	Fund No 2712 Account 800870	29,419.37

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 5
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Vendor Name	Date Paid	Description	Amount Paid
Humboldt County Treasurer	07/31/2019	<i>Fund No 3876 Account 800870</i>	45,611.43
Total Humboldt County Treasurer:			75,030.80
Humboldt Redwood Company, LLC			
Humboldt Redwood Company, LLC	07/22/2019	<i>Mt Pierce Lease site</i>	274.28
Total Humboldt Redwood Company, LLC:			274.28
Humboldt Waste Management Authority			
Humboldt Waste Management Authority	07/30/2019	<i>dispose of Essex waste</i>	37.40
Total Humboldt Waste Management Authority:			37.40
Industrial Electric			
Industrial Electric	07/31/2019	<i>Collectors Pump Oiler</i>	59.68
Industrial Electric	07/31/2019	<i>Collector 3 Repairs</i>	51.95
Industrial Electric	07/31/2019	<i>Collectors Pump Oiler</i>	97.02
Industrial Electric	07/31/2019	<i>maintenance supplies</i>	294.40
Total Industrial Electric:			503.05
JTN Energy, LLC			
JTN Energy, LLC	07/09/2019	<i>Consultant Services Agreement</i>	1,889.67
Total JTN Energy, LLC:			1,889.67
Larry Raschein			
Larry Raschein	07/09/2019	<i>Travel Advance - Ruth Hydro coverage</i>	137.50
Total Larry Raschein:			137.50
Lisa Newell			
Lisa Newell	07/31/2019	<i>auto mileage reimbursement</i>	41.30
Total Lisa Newell:			41.30
Lui Ahmad			
Lui Ahmad	07/22/2019	<i>Expense Reimbursement - Insurance to ship particle counter</i>	75.00
Total Lui Ahmad:			75.00
Mario Palmero			
Mario Palmero	07/22/2019	<i>Essex Petty Cash-Office Supplies</i>	36.15
Mario Palmero	07/22/2019	<i>Essex Petty Cash - TRF Maintenance</i>	8.55
Mario Palmero	07/22/2019	<i>Essex Petty Cash - Essex Maintenance</i>	37.76
Mario Palmero	07/22/2019	<i>Essex Petty Cash - HB Customer Service</i>	.98
Mario Palmero	07/22/2019	<i>Essex Petty Cash - Fieldbrook-Glendale CSD customer service</i>	2.78
Mario Palmero	07/22/2019	<i>Essex Petty Cash - Ruth Bunkhouse Maintenance</i>	8.24
Mario Palmero	07/22/2019	<i>Essex Petty Cash - Vehicle Maintenance</i>	12.99
Mario Palmero	07/22/2019	<i>Essex Petty Cash - Safety Supplies/Meeting</i>	29.50
Mario Palmero	07/22/2019	<i>Essex Petty Cash - E-Waste Disposal</i>	2.25
Total Mario Palmero:			139.20
Miller Farms Nursery			
Miller Farms Nursery	07/31/2019	<i>Park 4 Fence Repair</i>	526.61

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 6
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Vendor Name	Date Paid	Description	Amount Paid
Miller Farms Nursery	07/31/2019	Park 4 Fence Repair	106.45
Miller Farms Nursery	07/31/2019	Park 4 Fence Repair	90.04
Miller Farms Nursery	07/31/2019	Vegetation Management Supplies	67.82
Total Miller Farms Nursery:			790.92
Mission Linen			
Mission Linen	07/09/2019	Uniform Rental	110.31
Mission Linen	07/09/2019	maintenance supplies	96.61
Mission Linen	07/09/2019	Uniform Rental	97.26
Mission Linen	07/09/2019	maintenance supplies	97.66
Mission Linen	07/09/2019	Uniform Rental	120.14
Mission Linen	07/09/2019	Uniform Rental	107.09
Total Mission Linen:			629.07
Mitchell, Brisso, Delaney & Vrieze			
Mitchell, Brisso, Delaney & Vrieze	07/09/2019	Legal Services- June 2019	415.00
Mitchell, Brisso, Delaney & Vrieze	07/09/2019	Legal Services-Ruth Lake Lease June 2019	31.00
Total Mitchell, Brisso, Delaney & Vrieze:			446.00
Napa Auto Parts			
Napa Auto Parts	07/31/2019	Unit 5 Crane Battery Replacement	77.60
Napa Auto Parts	07/31/2019	Unit 5 Crane Battery Replacement	13.65
Napa Auto Parts	07/31/2019	Fleet Maintenance & Repair Unit 5	105.75
Napa Auto Parts	07/31/2019	Unit 5 Maintenance	28.45
Napa Auto Parts	07/31/2019	Unit 5 Repairs	13.06
Napa Auto Parts	07/31/2019	Unit 3 Repairs	9.37
Napa Auto Parts	07/31/2019	Collectors Air Regulator Systems	120.14
Napa Auto Parts	07/31/2019	vehicle maintenance Unit 13	14.46
Napa Auto Parts	07/31/2019	Pump Oiler Project - Collector 4	80.09
Napa Auto Parts	07/31/2019	maintenance supplies	22.57
Total Napa Auto Parts:			485.14
Network Management Services			
Network Management Services	07/30/2019	Essential Care Computer Service for Eureka office	1,086.19
Total Network Management Services:			1,086.19
North Coast Railroad			
North Coast Railroad	07/30/2019	TRF Fiber Optic Lease Fee	1,946.83
Total North Coast Railroad:			1,946.83
Northern California Safety Consortium			
Northern California Safety Consortium	07/09/2019	monthly membership fee	75.00
Total Northern California Safety Consortium:			75.00
O&M Industries			
O&M Industries	07/30/2019	UPC Shelving unit - FGCSO	179.84
Total O&M Industries:			179.84

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 7
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Vendor Name	Date Paid	Description	Amount Paid
Occupational Health Service of Mad River			
Occupational Health Service of Mad River	07/30/2019	DMV physicals - 2 employees	270.00
Occupational Health Service of Mad River	07/30/2019	PreEmployment physicals - 2 employees	170.00
Total Occupational Health Service of Mad River:			440.00
Pacific Gas & Electric Co.			
Pacific Gas & Electric Co.	07/22/2019	Ruth Bunkhouse	74.48
Pacific Gas & Electric Co.	07/22/2019	Eureka office	400.36
Pacific Gas & Electric Co.	07/22/2019	Jackson Ranch Rectifier	9.53
Pacific Gas & Electric Co.	07/22/2019	299 Rectifier	9.53
Pacific Gas & Electric Co.	07/22/2019	West End Road Rectifier	9.53
Pacific Gas & Electric Co.	07/22/2019	TRF	6,545.90
Pacific Gas & Electric Co.	07/22/2019	Ruth Hydro Valve Control	24.35
Pacific Gas & Electric Co.	07/22/2019	Ruth Hydro	166.41
Pacific Gas & Electric Co.	07/22/2019	Samoa Booster Pump Station	1,156.70
Pacific Gas & Electric Co.	07/22/2019	Samoa Dial Station	26.95
Pacific Gas & Electric Co.	07/22/2019	Essex Pumping	56,425.02
Total Pacific Gas & Electric Co.:			64,848.76
Pacific Paper Co.			
Pacific Paper Co.	07/30/2019	Eureka office supplies	382.58
Pacific Paper Co.	07/30/2019	Eureka office supplies	332.70
Pacific Paper Co.	07/30/2019	Humboldt Bay Retail Customer - office supplies	17.50
Pacific Paper Co.	07/30/2019	Fieldbrook-Glendale CSD customer service supplies	17.50
Total Pacific Paper Co.:			750.28
PERS			
PERS	07/19/2019	Unfunded Accrued Liability Classic and PEPR	178,077.00
Total PERS:			178,077.00
Pitney Bowes			
Pitney Bowes	07/23/2019	refill postage	500.00
Pitney Bowes	07/23/2019	Mail FERC EAPs	100.00
Total Pitney Bowes:			600.00
PitStop Cleaning`			
PitStop Cleaning`	07/30/2019	Eureka office cleaning	160.00
Total PitStop Cleaning`:			160.00
Platt Electric Supply			
Platt Electric Supply	07/22/2019	Collector 1 Electrical Upgrade	81.73
Platt Electric Supply	07/22/2019	Essex hot water heater replacement	256.06
Platt Electric Supply	07/31/2019	Brady Label Tape	98.25
Platt Electric Supply	07/31/2019	Electrical shop supplies	486.23
Platt Electric Supply	07/22/2019	Label Maker Supplies	399.40
Total Platt Electric Supply:			1,321.67
PPG Architectural Coatings			
PPG Architectural Coatings	07/31/2019	maintenance shop supplies	144.64
PPG Architectural Coatings	07/31/2019	TRF Pretreat Filter maintenance	63.19

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 8
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Vendor Name	Date Paid	Description	Amount Paid
Total PPG Architectural Coatings:			207.83
Rebecca J. Moyle			
Rebecca J. Moyle	07/09/2019	<i>auto mileage reimbursement</i>	44.08
Rebecca J. Moyle	07/23/2019	<i>Eureka office petty cash - Joint Board Meeting w/RLCSD</i>	149.17
Total Rebecca J. Moyle:			193.25
Recology Arcata			
Recology Arcata	07/22/2019	<i>Essex Garbage Service</i>	611.57
Total Recology Arcata:			611.57
Recology Humboldt County			
Recology Humboldt County	07/09/2019	<i>Eureka office garbage/recycling service</i>	90.72
Total Recology Humboldt County:			90.72
Redwood Electrical Services			
Redwood Electrical Services	07/31/2019	<i>Collector 1 Electrical Upgrades</i>	25,000.00
Redwood Electrical Services	07/31/2019	<i>Collector 1 Electrical Upgrades</i>	15,000.00
Total Redwood Electrical Services:			40,000.00
Renner Petroleum			
Renner Petroleum	07/10/2019	<i>cardlock fuel - pumping & control</i>	462.60
Renner Petroleum	07/10/2019	<i>cardlock fuel - water quality</i>	462.60
Renner Petroleum	07/10/2019	<i>cardlock fuel - maintenance</i>	462.59
Renner Petroleum	07/10/2019	<i>cardlock fuel - customer service (Humboldt Bay Retail)</i>	120.28
Renner Petroleum	07/10/2019	<i>cardlock fuel - customer service (Fieldbrook-Glendale CSD)</i>	342.32
Total Renner Petroleum:			1,850.39
Rogers Machinery Company, Inc			
Rogers Machinery Company, Inc	07/31/2019	<i>Backup Sample Pump for Domestic and CT reservoir analyzers</i>	691.80
Total Rogers Machinery Company, Inc:			691.80
Ryan Schneider			
Ryan Schneider	07/30/2019	<i>expense reimbursement for Safety Shoes</i>	215.50
Total Ryan Schneider:			215.50
Sean Grant			
Sean Grant	07/09/2019	<i>Refund-Overpayment on Closed Account</i>	7.00
Total Sean Grant:			7.00
Sitestar Nationwide Internet			
Sitestar Nationwide Internet	07/09/2019	<i>Essex Internet</i>	52.90
Total Sitestar Nationwide Internet:			52.90
Springville Safety/Supply			
Springville Safety/Supply	07/30/2019	<i>smoke detector safety supplies</i>	195.30

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 9
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Vendor Name	Date Paid	Description	Amount Paid
Total Springville Safety/Supply:			195.30
Staples			
Staples	07/30/2019	Eureka office supplies	130.18
Staples	07/30/2019	Eureka office supplies	8.88
Total Staples:			139.06
Stillwater Sciences			
Stillwater Sciences	07/22/2019	professional assistance -Streambed Flow Enhancement Project	987.50
Total Stillwater Sciences:			987.50
Streamline			
Streamline	07/09/2019	Website maintenance membership fee	450.00
Streamline	07/31/2019	Website maintenance membership fee	450.00
Total Streamline:			900.00
Sudden Link			
Sudden Link	07/09/2019	Essex internet	127.45
Sudden Link	07/22/2019	Eureka Internet	207.45
Sudden Link	07/09/2019	TRF Internet - Fieldbrook-Glendale CSD	45.14
Sudden Link	07/09/2019	TRF Internet - Blue Lake SCADA Monitoring	45.14
Sudden Link	07/09/2019	TRF Internet	22.56
Sudden Link	07/22/2019	Fieldbrook-Glendale CSD Internet	293.52
Sudden Link	07/31/2019	Essex internet	127.45
Total Sudden Link:			868.71
T.P. Tire Service, Inc			
T.P. Tire Service, Inc	07/31/2019	Chipper repair	10.00
T.P. Tire Service, Inc	07/31/2019	flat repair Unit 13	15.00
Total T.P. Tire Service, Inc:			25.00
Thatcher Company, Inc			
Thatcher Company, Inc	07/31/2019	replenish chlorine - container credit	2,000.00-
Thatcher Company, Inc	07/31/2019	replenish chlorine	4,838.45
Total Thatcher Company, Inc:			2,838.45
The Mill Yard			
The Mill Yard	07/22/2019	Maintenance shop loft organization	21.79
The Mill Yard	07/31/2019	Line shed 7 repairs	59.39
The Mill Yard	07/31/2019	Shop Tool Supplies	15.16
The Mill Yard	07/31/2019	Generator Enclosure materials	83.43
The Mill Yard	07/31/2019	Emergency Generator Supplies	51.48
The Mill Yard	07/31/2019	Eureka Office Roof Repair	126.91
Total The Mill Yard:			358.16
The Times-Standard			
The Times-Standard	07/09/2019	Essex Times-Standard subscription	274.04

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 7/1/2019-7/31/2019Page: 10
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Vendor Name	Date Paid	Description	Amount Paid
Total The Times-Standard:			274.04
Thomas Law Group			
Thomas Law Group	07/22/2019	Legal Fees - June	3,387.50
Total Thomas Law Group:			3,387.50
Thrifty Supply			
Thrifty Supply	07/31/2019	Collectors Pump Oilers	71.74
Thrifty Supply	07/31/2019	Mainline Valve Replacement - Collector 4	13,312.95
Thrifty Supply	07/31/2019	Plumbing Supply Restock	139.83
Thrifty Supply	07/31/2019	Mainline Valve Replacement - Collector 4	3,035.83
Thrifty Supply	07/31/2019	TRF chemical system maintenance	1,021.33
Total Thrifty Supply:			17,581.68
Trinity County General Services			
Trinity County General Services	07/30/2019	Pickett Peak site lease	250.00
Total Trinity County General Services:			250.00
Trinity County Solid Waste			
Trinity County Solid Waste	07/22/2019	Ruth HQ dump fees	13.32
Trinity County Solid Waste	07/22/2019	Ruth Hydro dump fees	13.33
Total Trinity County Solid Waste:			26.65
U.S. Bank PARS Account #6746050100			
U.S. Bank PARS Account #6746050100	07/22/2019	Annual Section 115 Pension Trust Contribution	50,000.00
Total U.S. Bank PARS Account #6746050100:			50,000.00
Underground Service Alert			
Underground Service Alert	07/22/2019	Annual Membership	369.55
Underground Service Alert	07/22/2019	Annual Membership	1,051.78
Total Underground Service Alert:			1,421.33
Verizon Wireless			
Verizon Wireless	07/10/2019	General Manager	37.38
Verizon Wireless	07/10/2019	Customer Service - Humboldt Bay	11.49
Verizon Wireless	07/10/2019	Customer Service - Fieldbrook-Glendale CSD	32.70
Verizon Wireless	07/10/2019	Operations 1	.18
Verizon Wireless	07/10/2019	Customer Service Ipad-Humboldt Bay	9.88
Verizon Wireless	07/10/2019	Customer Service Ipad - Fieldbrook-Glendale CSD	28.13
Verizon Wireless	07/10/2019	Unit 6 - Ruth Area	32.03
Verizon Wireless	07/10/2019	Unit 6 - Ruth Hydro	32.02
Total Verizon Wireless:			183.81
Grand Totals:			647,647.26

Humboldt Bay Municipal Water District

--Monthly Overtime Report--
Pay period dates: 7/1/2019 - 7/31/2019Page: 1
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Position Title	2-01 Overtime Emp Hrs	2-01 Overtime Emp Amt	2-02 Doubletime Emp Hrs	2-02 Doubletime Emp Amt
Actg/HR Spec	4.50	\$327	.00	\$0
Total ADMIN:	4.50	\$327	.00	\$0
Elec & Ins Tech	.50	\$29	.00	\$0
Oper & Mnt Tech	2.00	\$84	.00	\$0
Maint Worker	2.50	\$69	.00	\$0
Oper & Mnt Tech	.50	\$26	.00	\$0
Total ESSEX:	5.50	\$209	.00	\$0
Grand Totals:	10.00	\$535	.00	\$0

Humboldt Bay Municipal Water District

To: Board of Directors

From: Chris Harris

Date: August 8, 2019

Re: Review of PARS Trust

Review

In January 2018, the Board of Directors approved the establishment of a PARS Section 115 Trust for the purpose of stabilizing the Unfunded CalPERS Pension liability. Funds are held in the Trust, (an investment account) and withdrawn during the years the unfunded liability payment exceeds \$200,000 – in this manner the Trust acts as a “Pension Stabilization” Fund.

Discussion

At inception, the Board approved participation in the “Moderate” Investment Portfolio. While this fund is slightly more volatile (subject to market conditions) than the “Conservative” and “Moderately Conservative” Portfolios, it is not as aggressive (and therefore more volatile) as the “Balanced” or “Capital Appreciation” Investment Portfolios. The graph below shows how the District’s Trust has performed since the initial funding of \$600,000 (April 2018) and additional contribution of \$50,000 in July 2018. The District’s Trust has benefited from returns of 6.76% over the last 12-months.



As the Board is aware, any investment account is subject to market conditions which change continuously. Staff feels it is important to review the District’s position and investment portfolio strategy to ensure it still meets with the goals of the Board.

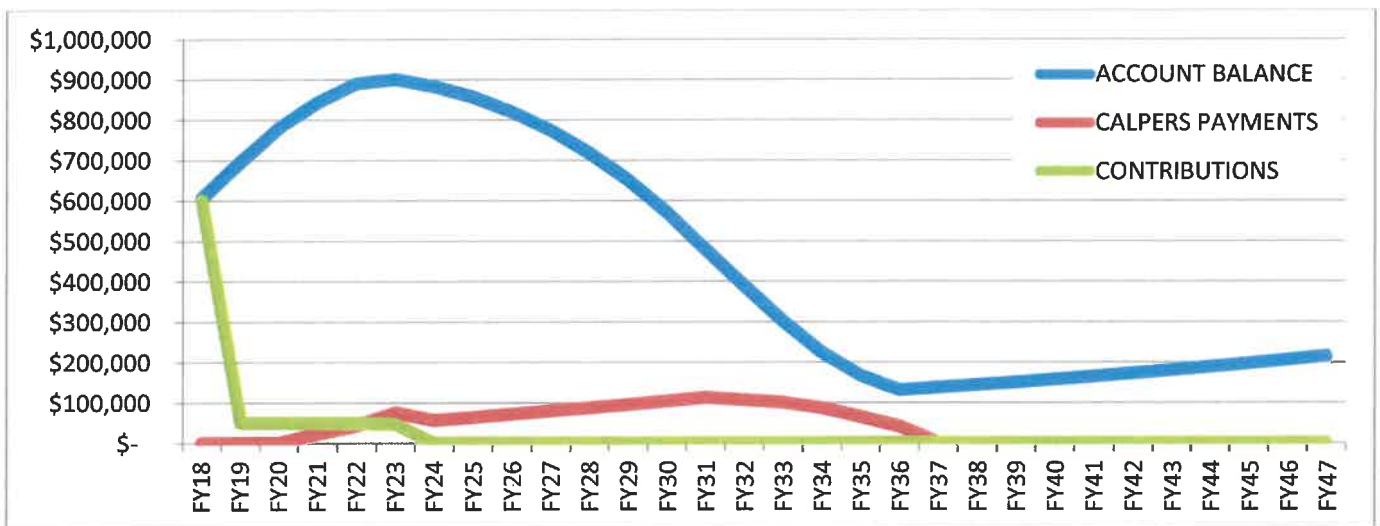
The District has several options.

1. Remain in the “Moderate” Portfolio
2. Move the Trust funds into a more conservative portfolio

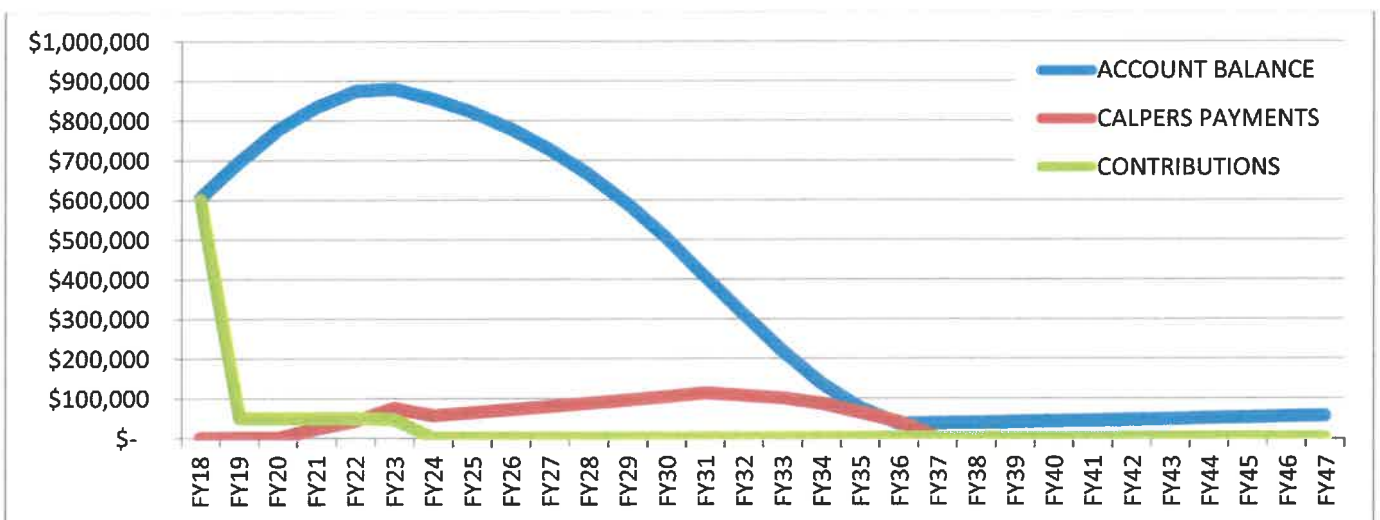
On the following pages, staff has provided simplified graphs depicting the differences of various strategies. Staff has also included the most recent investment portfolio information from HighMark Capital Management (Portfolio Managers).

Assumptions for all graphs: Board Approved contributions (initial \$600,000, \$50,000 FY19-FY22, \$47,000 FY23).

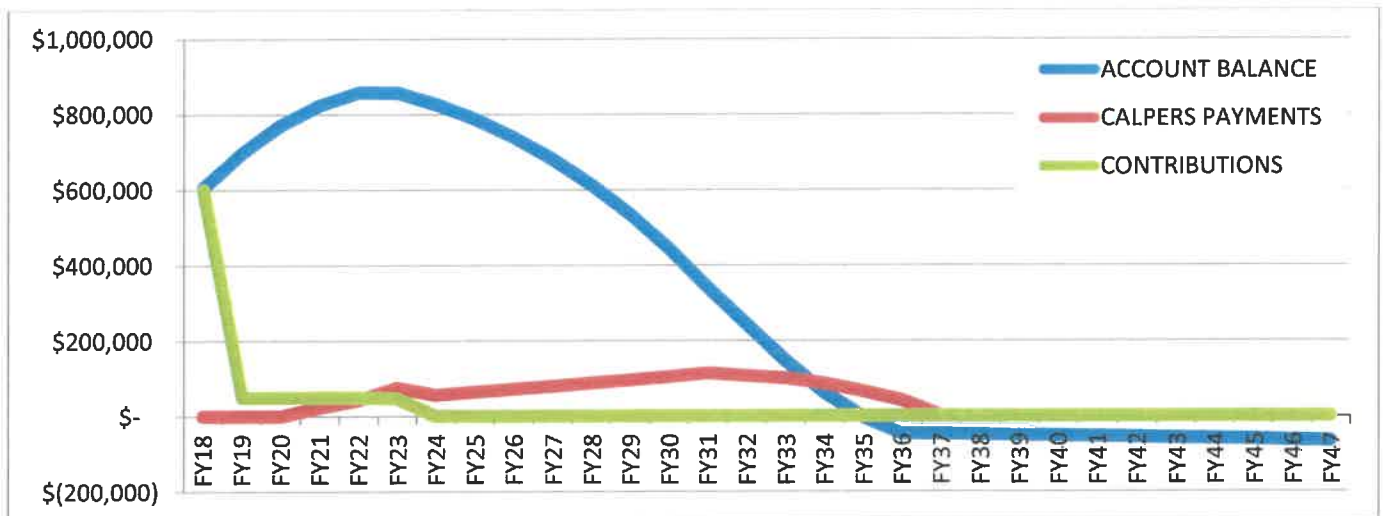
SCENARIO ONE – MODERATE PORTFOLIO “STAY THE COURSE”



SCENARIO TWO – MOVE TO A MODERATELY CONSERVATIVE PORTFOLIO

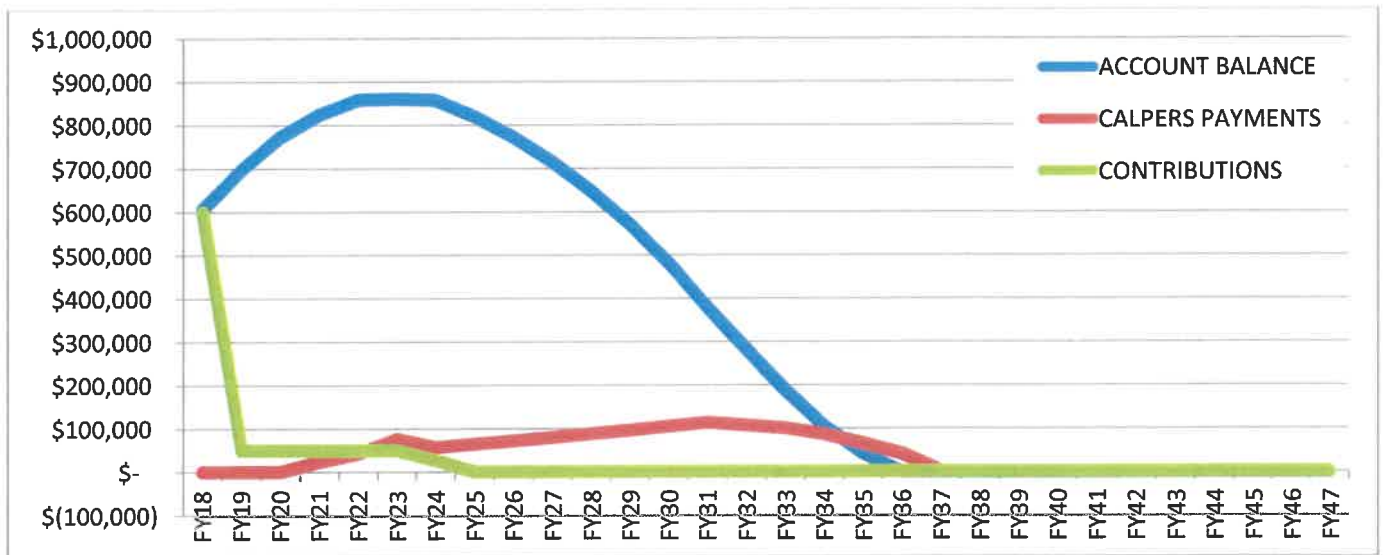


SCENARIO TWO – MOVE TO A CONSERVATIVE PORTFOLIO*



*The Conservative Portfolio will not suffice the Districts needs without an additional contribution of \$30,000.

SCENARIO TWO – MOVE TO A CONSERVATIVE PORTFOLIO – WITH ADDITIONAL \$30k CONTRIBUTION



Staff Recommendation

To conserve principle and protect the gains made, staff recommends shifting to a “Moderately Conservative” Investment Portfolio, to be reviewed again in approximately twelve months.



PARS DIVERSIFIED PORTFOLIOS CONSERVATIVE

Q2 2019

WHY THE PARS DIVERSIFIED CONSERVATIVE PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

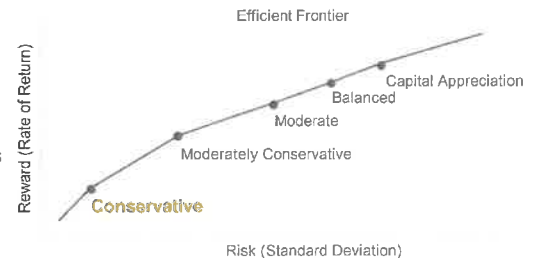
In order to meet the unique needs of our clients, we offer access to flexible implementation strategies: HighMark Plus utilizes actively managed mutual funds while Index Plus utilizes index-based securities, including exchange-traded funds. Both investment options leverage HighMark's active asset allocation approach.

Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide a consistent level of inflation-protected income over the long-term. The major portion of the assets will be fixed income related. Equity securities are utilized to provide inflation protection.



ASSET ALLOCATION — CONSERVATIVE PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	5 – 20%	15%	16%
Fixed Income	60 – 95%	80%	78%
Cash	0 – 20%	5%	6%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)		Index Plus Composite (Passive)	
Current Quarter*	2.98%	Current Quarter*	2.62%
Blended Benchmark*,**	2.67%	Blended Benchmark*,**	2.67%
Year To Date*	7.72%	Year To Date*	7.01%
Blended Benchmark*,**	6.80%	Blended Benchmark*,**	6.80%
1 Year	7.22%	1 Year	6.76%
Blended Benchmark**	6.62%	Blended Benchmark**	6.62%
3 Year	4.29%	3 Year	3.57%
Blended Benchmark**	3.77%	Blended Benchmark**	3.77%
5 Year	3.60%	5 Year	3.21%
Blended Benchmark**	3.38%	Blended Benchmark**	3.38%
10 Year	5.25%	10 Year	4.75%
Blended Benchmark**	4.39%	Blended Benchmark**	4.39%

* Returns less than one year are not annualized. ** Breakdown for Blended Benchmark: From 10/1/2012 - Present: 7.5% S&P500, 1.5% Russell Mid Cap, 2.5% Russell 2000, 1% MSCI EM (net), 2% MSCI EAFE (net), 52.25% BBG Barclays US Agg, 25.75% ICE BofAML 1-3 Yr US Corp/Gov't, 2% ICE BofAML US High Yield Master II, 0.5% Wishire REIT, and 5% FTSE 1 Mth T-Bill. From 4/1/2007 - 9/30/2012, the blended benchmark was 12% S&P 500, 1% Russell 2000, 2% MSCI EAFE (net), 40% ICE BofAML 1-3 Year Corp./Gov't, 40% BBG Barclays US Agg, 5% FTSE 1 Mth T-Bill. Prior to April 2007: the blended benchmark was 15% S&P 500, 40% ICE BofAML 1-3Yr Corp/Gov, 40% BBG Barclays US Agg, and 5% FTSE 1 Mth T-Bill.

ANNUAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)		Index Plus Composite (Passive)	
2008	-9.04%	2008	-6.70%
2009	15.59%	2009	10.49%
2010	8.68%	2010	7.67%
2011	2.19%	2011	3.70%
2012	8.45%	2012	6.22%
2013	3.69%	2013	3.40%
2014	3.88%	2014	4.32%
2015	0.29%	2015	0.06%
2016	4.18%	2016	3.75%
2017	6.73%	2017	5.52%
2018	-1.35%	2018	-1.09%

PORTFOLIO FACTS

HighMark Plus (Active)		Index Plus (Passive)	
Composite Inception Date	07/2004	Composite Inception Date	07/2004
No of Holdings in Portfolio	18	No of Holdings in Portfolio	12

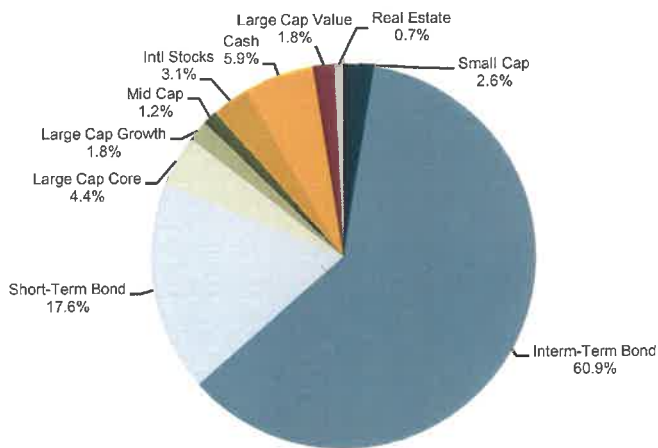
HOLDINGS**HighMark Plus (Active)**

Columbia Contrarian Core I3
 Vanguard Growth & Income Adm
 Dodge & Cox Stock Fund
 Harbor Capital Appreciation - Retirement
 T. Rowe Price Growth Stock - I
 iShares Russell Mid-Cap ETF
 Vanguard Real Estate ETF
 Undiscovered Managers Behavioral Value-R6
 Victory RS Small Cap Growth - R6
 DFA Large Cap International Portfolio
 Dodge & Cox International Stock
 MFS International Growth - R6
 Hartford Schroders Emerging Markets Eq
 Vanguard Short-Term Invest-Grade Adm
 PIMCO Total Return Fund - Inst
 PGIM Total Return Bond - R6
 DoubleLine Core Fixed Income - I
 First American Government Obligations Z

Index Plus (Passive)

iShares Core S&P 500 ETF
 iShares S&P 500 Value ETF
 iShares S&P 500 Growth ETF
 iShares Russell Mid-Cap ETF
 Vanguard Real Estate ETF
 iShares Russell 2000 Value ETF
 iShares Russell 2000 Growth ETF
 iShares MSCI EAFE ETF
 Vanguard FTSE Emerging Markets ETF
 Vanguard Short-Term Invest-Grade Adm
 iShares Core U.S. Aggregate
 First American Government Obligations Z

Holdings are subject to change at the discretion of the investment manager.

STYLE

The performance records shown represent size-weighted composites of tax exempt accounts that meet the following criteria: Accounts are managed by HighMark's Portfolio Management Group (PMG) with full investment authority according to the PARS Conservative active and passive objectives.

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HIGHMARK CAPITAL MANAGEMENT

350 California Street
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ABOUT THE ADVISER

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ABOUT THE PORTFOLIO MANAGEMENT TEAM**Andrew Brown, CFA®**

Senior Portfolio Manager
 Investment Experience: since 1994
 HighMark Tenure: since 1997
 Education: MBA, University of Southern California; BA, University of Southern California

Salvatore "Tory" Milazzo III, CFA®

Senior Portfolio Manager
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 Education: BA, Colgate University

J. Keith Stribling, CFA®

Senior Portfolio Manager
 Investment Experience: since 1985
 HighMark Tenure: since 1995
 Education: BA, Stetson University

Christiane Tsuda

Senior Portfolio Manager
 Investment Experience: since 1987
 HighMark Tenure: since 2010
 Education: BA, International Christian University, Tokyo

Anne Wimmer, CFA®

Senior Portfolio Manager
 Investment Experience: since 1987
 HighMark Tenure: since 2007
 Education: BA, University of California, Santa Barbara

Randy Yurchak, CFA®

Senior Portfolio Manager
 Investment Experience: since 2002
 HighMark Tenure: since 2017
 Education: MBA, Arizona State University; BS, University of Washington

Asset Allocation Committee

Number of Members: 16
 Average Years of Experience: 28
 Average Tenure (Years): 15

Manager Review Group

Number of Members: 7
 Average Years of Experience: 19
 Average Tenure (Years): 7

*Assets under management ("AUM") include assets for which HighMark provides continuous and regular supervisory and management services. Assets under advisement ("AUA") include assets for which HighMark provides certain investment advisory services (including, but not limited to, investment research and strategies) for client assets of its parent company, MUFJ Union Bank, N.A.



PARS DIVERSIFIED PORTFOLIOS MODERATELY CONSERVATIVE

Q2 2019

WHY THE PARS DIVERSIFIED MODERATELY CONSERVATIVE PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

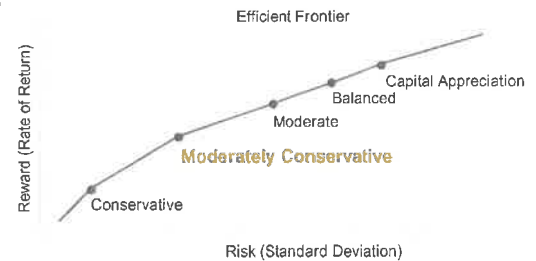
In order to meet the unique needs of our clients, we offer access to flexible implementation strategies: HighMark Plus utilizes actively managed mutual funds while Index Plus utilizes index-based securities, including exchange-traded funds. Both investment options leverage HighMark's active asset allocation approach.

Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide current income, with capital appreciation as a secondary objective. The major portion of the assets is committed to income-producing securities. Market fluctuations should be expected.



ASSET ALLOCATION — MODERATELY CONSERVATIVE PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	20 - 40%	30%	31%
Fixed Income	50 - 80%	65%	66%
Cash	0 - 20%	5%	3%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)		Index Plus Composite (Passive)	
Current Quarter*	3.10%	Current Quarter*	2.83%
Blended Benchmark**, **	2.97%	Blended Benchmark**, **	2.97%
Year To Date*	9.37%	Year To Date*	8.98%
Blended Benchmark**, **	8.90%	Blended Benchmark**, **	8.90%
1 Year	7.01%	1 Year	6.99%
Blended Benchmark**	6.97%	Blended Benchmark**	6.97%
3 Year	5.82%	3 Year	5.10%
Blended Benchmark**	5.40%	Blended Benchmark**	5.40%
5 Year	4.34%	5 Year	4.16%
Blended Benchmark**	4.40%	Blended Benchmark**	4.40%
10 Year	6.71%	10 Year	6.24%
Blended Benchmark**	6.11%	Blended Benchmark**	6.11%

* Returns less than one year are not annualized. ** Breakdown for Blended Benchmark: From 10/1/2012 - Present: 15.5% S&P500, 3% Russell Mid Cap, 4.5% Russell 2000, 2% MSCI EM (net), 4% MSCI EAFE (net), 49.25% BBG Barclays US Agg, 14% ICE BofAML 1-3 Yr US Corp/Govt, 1.75% ICE BofAML US High Yield Master II, 1% Wilshire REIT, and 5% FTSE 1 Mth T-Bill. From 4/1/2007 - 9/30/2012: the blended benchmark was 25% S&P 500, 1.5% Russell 2000, 3.5% MSCI EAFE (net), 25% ICE BofAML 1-3 Year Corp./Govt, 40% BBG Barclays US Agg, 5% FTSE 1 Mth T-Bill. Prior to April 2007, the blended benchmark was 30% S&P 500, 25% ICE BofAML 1-3Yr Corp/Govt, 40% BBG Barclays US Agg, and 5% FTSE 1 Mth T-Bill.

ANNUAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)		Index Plus Composite (Passive)	
2008	-15.37%	2008	-12.40%
2009	18.71%	2009	11.92%
2010	10.46%	2010	9.72%
2011	1.75%	2011	3.24%
2012	10.88%	2012	8.24%
2013	7.30%	2013	6.78%
2014	4.41%	2014	5.40%
2015	0.32%	2015	-0.18%
2016	4.94%	2016	5.42%
2017	9.56%	2017	8.08%
2018	-2.60%	2018	-2.33%

PORTFOLIO FACTS

HighMark Plus (Active)		Index Plus (Passive)	
Composite Inception Date	08/2004	Composite Inception Date	05/2005
No of Holdings in Portfolio	18	No of Holdings in Portfolio	12

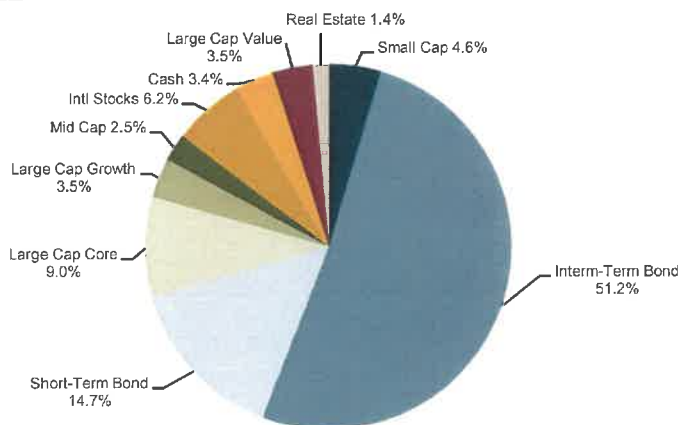
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Index Plus (Passive)

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Senior Portfolio Manager
 Investment Experience: since 1994
 HighMark Tenure: since 1997
 Education: MBA, University of Southern California; BA, University of Southern California

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 Investment Experience: since 1985
 HighMark Tenure: since 1995
 Education: BA, Stetson University

Christiane Tsuda

Senior Portfolio Manager
 Investment Experience: since 1987
 HighMark Tenure: since 2010
 Education: BA, International Christian University, Tokyo

Anne Wimmer, CFA®

Senior Portfolio Manager
 Investment Experience: since 1987
 HighMark Tenure: since 2007
 Education: BA, University of California, Santa Barbara

Randy Yurchak, CFA®

Senior Portfolio Manager
 Investment Experience: since 2002
 HighMark Tenure: since 2017
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Asset Allocation Committee

Number of Members: 16
 Average Years of Experience: 28
 Average Tenure (Years): 15

Manager Review Group

Number of Members: 7
 Average Years of Experience: 19
 Average Tenure (Years): 7

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PARS DIVERSIFIED PORTFOLIOS MODERATE

Q2 2019

WHY THE PARS DIVERSIFIED MODERATE PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

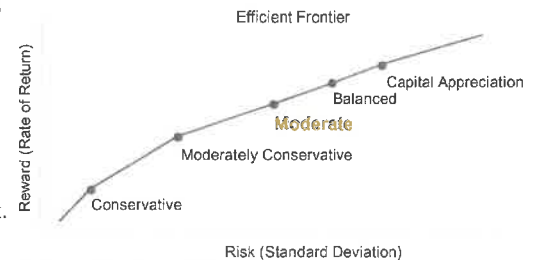
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The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide current income and moderate capital appreciation. It is expected that dividend and interest income will comprise a significant portion of total return, although growth through capital appreciation is equally important.



ASSET ALLOCATION — MODERATE PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	40 - 60%	50%	51%
Fixed Income	40 - 60%	45%	46%
Cash	0 - 20%	5%	3%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)		Index Plus Composite (Passive)	
Current Quarter*	3.23%	Current Quarter*	2.95%
Blended Benchmark**, **	3.16%	Blended Benchmark**, **	3.16%
Year To Date*	11.74%	Year To Date*	11.36%
Blended Benchmark**, **	11.35%	Blended Benchmark**, **	11.35%
1 Year	6.94%	1 Year	6.77%
Blended Benchmark**	6.95%	Blended Benchmark**	6.95%
3 Year	7.95%	3 Year	7.14%
Blended Benchmark**	7.52%	Blended Benchmark**	7.52%
5 Year	5.43%	5 Year	5.18%
Blended Benchmark**	5.62%	Blended Benchmark**	5.62%
10 Year	8.35%	10 Year	8.09%
Blended Benchmark**	8.18%	Blended Benchmark**	8.18%

* Returns less than one year are not annualized. ** Breakdown for Blended Benchmark: From 10/1/2012 – Present: 26.5% S&P500, 5% Russell Mid Cap, 7.5% Russell 2000, 3.25% MSCI EM (net), 6% MSCI EAFE (net), 33.50% BBG Barclays US Agg, 10% ICE BofAML 1-3 Yr US Corp/Gov't, 1.50% ICE BofAML US High Yield Master II, 1.75% Wlshire REIT, and 5% FTSE 1 Mth T-Bill. From 4/1/2007 – 9/30/2012: the blended benchmark was 43% S&P 500; 2% Russell 2000, 5% MSCI EAFE (net), 15% ICE BofAML 1-3 Year Corp./Gov't, 30% BBG Barclays US Agg, 5% FTSE 1 Mth T-Bill. Prior to April 2007: the blended benchmark was 50% S&P 500, 15% ICE BofAML 1-3Yr Corp/Gov, 30% BBG Barclays US Agg, and 5% FTSE 1 Mth T-Bill.

ANNUAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)		Index Plus Composite (Passive)	
2008	-22.88%	2008	-18.14%
2009	21.47%	2009	16.05%
2010	12.42%	2010	11.77%
2011	0.55%	2011	2.29%
2012	12.25%	2012	10.91%
2013	13.06%	2013	12.79%
2014	4.84%	2014	5.72%
2015	0.14%	2015	-0.52%
2016	6.45%	2016	7.23%
2017	13.19%	2017	11.59%
2018	-4.03%	2018	-4.03%

PORTFOLIO FACTS

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Composite Inception Date	10/2004	Composite Inception Date	05/2006
No of Holdings in Portfolio	18	No of Holdings in Portfolio	12

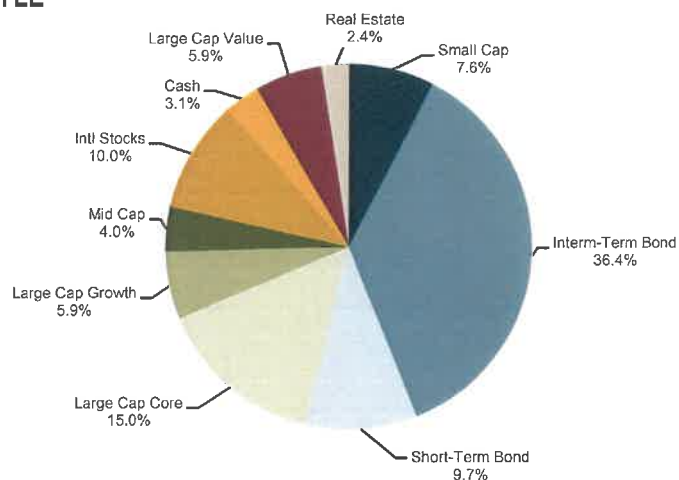
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Senior Portfolio Manager
 Investment Experience: since 1994
 HighMark Tenure: since 1997
 Education: MBA, University of Southern California; BA, University of Southern California

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Randy Yurchak, CFA®

Senior Portfolio Manager
 Investment Experience: since 2002
 HighMark Tenure: since 2017
 Education: MBA, Arizona State University; BS, University of Washington

Asset Allocation Committee

Number of Members: 16
 Average Years of Experience: 28
 Average Tenure (Years): 15

Manager Review Group

Number of Members: 7
 Average Years of Experience: 19
 Average Tenure (Years): 7

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PARS DIVERSIFIED PORTFOLIOS BALANCED

Q2 2019

WHY THE PARS DIVERSIFIED BALANCED PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

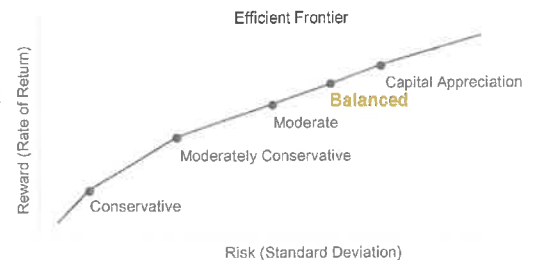
In order to meet the unique needs of our clients, we offer access to flexible implementation strategies: HighMark Plus utilizes actively managed mutual funds while Index Plus utilizes index-based securities, including exchange-traded funds. Both investment options leverage HighMark's active asset allocation approach.

Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide growth of principal and income. While dividend and interest income are an important component of the objective's total return, it is expected that capital appreciation will comprise a larger portion of the total return.



ASSET ALLOCATION — BALANCED PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	50 – 70%	60%	61%
Fixed Income	30 – 50%	35%	36%
Cash	0 – 20%	5%	3%

(Gross of Investment Management Fees, but Net of Embedded Fund Fees)

ANNUALIZED TOTAL RETURNS

HighMark Plus Composite (Active)

Current Quarter*	3.30%
Blended Benchmark**,**	3.26%
Year To Date*	13.04%
Blended Benchmark**,**	12.59%
1 Year	6.82%
Blended Benchmark**	6.90%
3 Year	9.11%
Blended Benchmark**	8.58%
5 Year	5.92%
Blended Benchmark**	6.22%
10 Year	9.07%
Blended Benchmark**	9.28%

Index Plus Composite (Passive)

Current Quarter*	3.04%
Blended Benchmark**,**	3.26%
Year To Date*	12.53%
Blended Benchmark**,**	12.59%
1 Year	6.55%
Blended Benchmark**	6.90%
3 Year	8.09%
Blended Benchmark**	8.58%
5 Year	5.65%
Blended Benchmark**	6.22%
10 Year	8.89%
Blended Benchmark**	9.28%

* Returns less than one year are not annualized. **Breakdown for Blended Benchmark: From 10/1/2012 – Present: 32% S&P500, 6% Russell Mid Cap, 9% Russell 2000, 4% MSCI EM (net), 7% MSCI EAFE (net), 27% BBG Barclays US Agg, 6.75% ICE BofAML 1-3 Yr US Corp/Gov't, 1.25% ICE BofAML US High Yield Master II, 2% Wilshire REIT, and 5% FTSE 1 Mth T-Bill. From 4/1/2007 – 9/30/2012: the blended benchmark was 51% S&P 500; 3% Russell 2000, 6% MSCI EAFE (net), 5% ICE BofAML 1-3 Year Corp./Govt, 30% BBG Barclays US Agg, 5% FTSE 1 Mth T-Bill. Prior to April 2007: the blended benchmark was 60% S&P 500, 5% ICE BofAML 1-3Yr Corp/Gov, 30% BBG Barclays US Agg, and 5% FTSE 1 Mth T-Bill.

ANNUAL RETURNS

(Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus Composite (Active)

2008	-25.72%
2009	21.36%
2010	14.11%
2011	-0.46%
2012	13.25%
2013	16.61%
2014	4.70%
2015	0.04%
2016	6.81%
2017	15.46%
2018	-4.88%

Index Plus Composite (Passive)

2008	-23.22%
2009	17.62%
2010	12.76%
2011	1.60%
2012	11.93%
2013	15.63%
2014	6.08%
2015	-0.81%
2016	8.25%
2017	13.39%
2018	-5.05%

PORTFOLIO FACTS

HighMark Plus (Active)

Composite Inception Date	10/2006
No of Holdings in Portfolio	18

Index Plus (Passive)

Composite Inception Date	10/2007
No of Holdings in Portfolio	12

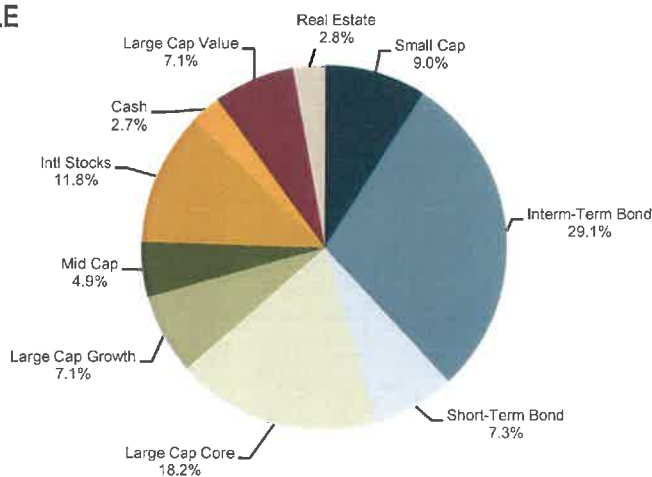
HOLDINGS**HighMark Plus (Active)**

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 Dodge & Cox Stock Fund
 Harbor Capital Appreciation - Retirement
 T. Rowe Price Growth Stock - I
 iShares Russell Mid-Cap ETF
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 Vanguard Short-Term Invest-Grade Adm
 PIMCO Total Return Fund - Inst
 PGIM Total Return Bond - R6
 DoubleLine Core Fixed Income - I
 First American Government Obligations Z

Index Plus (Passive)

iShares Core S&P 500 ETF
 iShares S&P 500 Value ETF
 iShares S&P 500 Growth ETF
 iShares Russell Mid-Cap ETF
 Vanguard Real Estate ETF
 iShares Russell 2000 Value ETF
 iShares Russell 2000 Growth ETF
 iShares MSCI EAFE ETF
 Vanguard FTSE Emerging Markets ETF
 Vanguard Short-Term Invest-Grade Adm
 iShares Core U.S. Aggregate
 First American Government Obligations Z

Holdings are subject to change at the discretion of the investment manager.

STYLE

The performance records shown represent size-weighted composites of tax exempt accounts that meet the following criteria: Accounts are managed by HighMark's Portfolio Management Group (PMG) with full investment authority according to the PARS Balanced active and passive objectives.

The composite name has been changed from PARS Balanced/Moderately Aggressive to PARS Balanced on 5/1/2013. The adviser to the PARS portfolios is US Bank, and HighMark serves as sub-adviser to US Bank to manage these portfolios. US Bank may charge clients as much as 0.60% annual management fee based on a sliding scale. US Bank pays HighMark 60% of the annual management fee for assets sub-advised by HighMark under its sub-advisory agreement with US Bank. The 0.36% paid to HighMark, as well as other expenses that may be incurred in the management of the portfolio, will reduce the portfolio's returns. Assuming an investment for five years, a 5% annual total return, and an annual sub-advisory fee rate of 0.36% deducted from the assets at market at the end of each year, a \$10 million initial value would grow to \$12.53 million after fees (Net-of-Fees) and \$12.76 million before fees (Gross-of-Fees). Gross returns are presented before management and custodial fees but after all trading expenses and reflect the reinvestment of dividends and other income. A client's return will be reduced by the advisory fees and other expenses it may incur as a client. Additional information regarding the firm's policies and procedures for calculating and reporting performance results is available upon request. Performance results are calculated and presented in U.S. dollars and do not reflect the deduction of investment advisory fees, custody fees, or taxes but do reflect the deduction of trading expenses. Returns are calculated based on trade-date accounting.

Blended benchmarks represent HighMark's strategic allocations between equity, fixed income, and cash and are rebalanced monthly. Benchmark returns do not reflect the deduction of advisory fees or other expenses of investing but assumes the reinvestment of dividends and other earnings. An investor cannot invest directly in an index. The unmanaged S&P 500 Index is representative of the performance of large companies in the U.S. stock market. The MSCI EAFE Index is a free float-adjusted market capitalization index designed to measure developed market equity performance, excluding the U.S. and Canada. The MSCI Emerging Markets index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The ICE BofAML US High Yield Master II Index tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market. Wilshire REIT index measures U.S. publicly traded Real Estate Investment Trusts. The unmanaged Bloomberg Barclays U.S. Aggregate Bond Index is generally representative of the U.S. taxable bond market as a whole. The ICE BofAML 1-3 Year U.S. Corporate & Government Index tracks the bond performance of the ICE BofAML U.S. Corporate & Government Index, with a remaining term to final maturity less than 3 years. The unmanaged FTSE 1-Month Treasury Bill Index tracks the yield of the 1-month U.S. Treasury Bill.

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HIGHMARK CAPITAL MANAGEMENT

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 800-582-4734

ABOUT THE ADVISER

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PARS DIVERSIFIED PORTFOLIOS CAPITAL APPRECIATION

Q2 2019

WHY THE PARS DIVERSIFIED CAPITAL APPRECIATION PORTFOLIO?

Comprehensive Investment Solution

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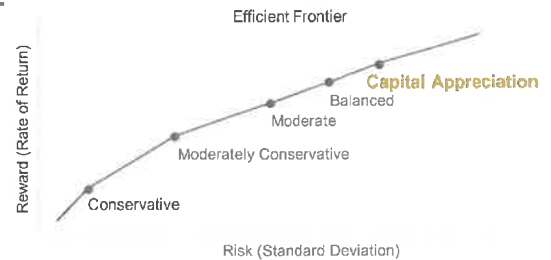
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INVESTMENT OBJECTIVE

To provide growth of principal. The major portion of the assets are invested in equity securities and market fluctuations are expected.



ASSET ALLOCATION — CAPITAL APPRECIATION PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	65 - 85%	75%	76%
Fixed Income	10 - 30%	20%	22%
Cash	0 - 20%	5%	2%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

Consolidated Composite

Current Quarter*	3.32%
Blended Benchmark*,**	3.37%
Year To Date*	14.55%
Blended Benchmark*,**	14.34%
1 Year	6.61%
Blended Benchmark**	6.65%
3 Year	10.10%
Blended Benchmark**	10.10%
5 Year	6.62%
Blended Benchmark**	6.94%
10 Year	9.93%
Blended Benchmark**	10.66%

* Returns less than one year are not annualized. **Breakdown for Blended Benchmark: 39.5% S&P500, 7.5% Russell Mid Cap, 10.5% Russell 2000, 5.25% MSCI EM (net), 10.25% MSCI EAFE (net), 16% BBG Barclays US Agg, 3% ICE BofAML 1-3 Yr US Corp/Gov't, 1% ICE BofAML US High Yield Master II, 2% Wilshire REIT, and 5% FTSE 1 Mth T-Bill.

ANNUAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

Consolidated Composite

2008	N/A
2009	23.77%
2010	12.95%
2011	-1.35%
2012	13.87%
2013	20.33%
2014	6.05%
2015	-0.27%
2016	8.81%
2017	16.72%
2018	-5.82%

PORTFOLIO FACTS

Consolidated Composite

Composite Inception Date	01/2009
No of Holdings in Portfolio	18

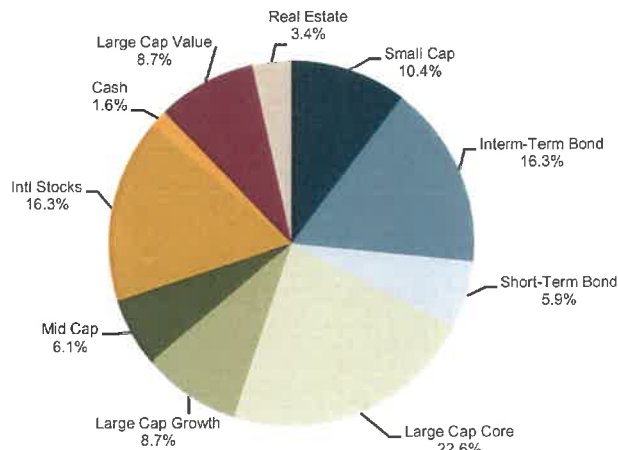
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OPERATIONS

Memo to: HBMWD Board of Directors
From: Dale Davidsen, Superintendent
Date: July 31, 2019
Subject: Essex/Ruth July 2019 Operational Report

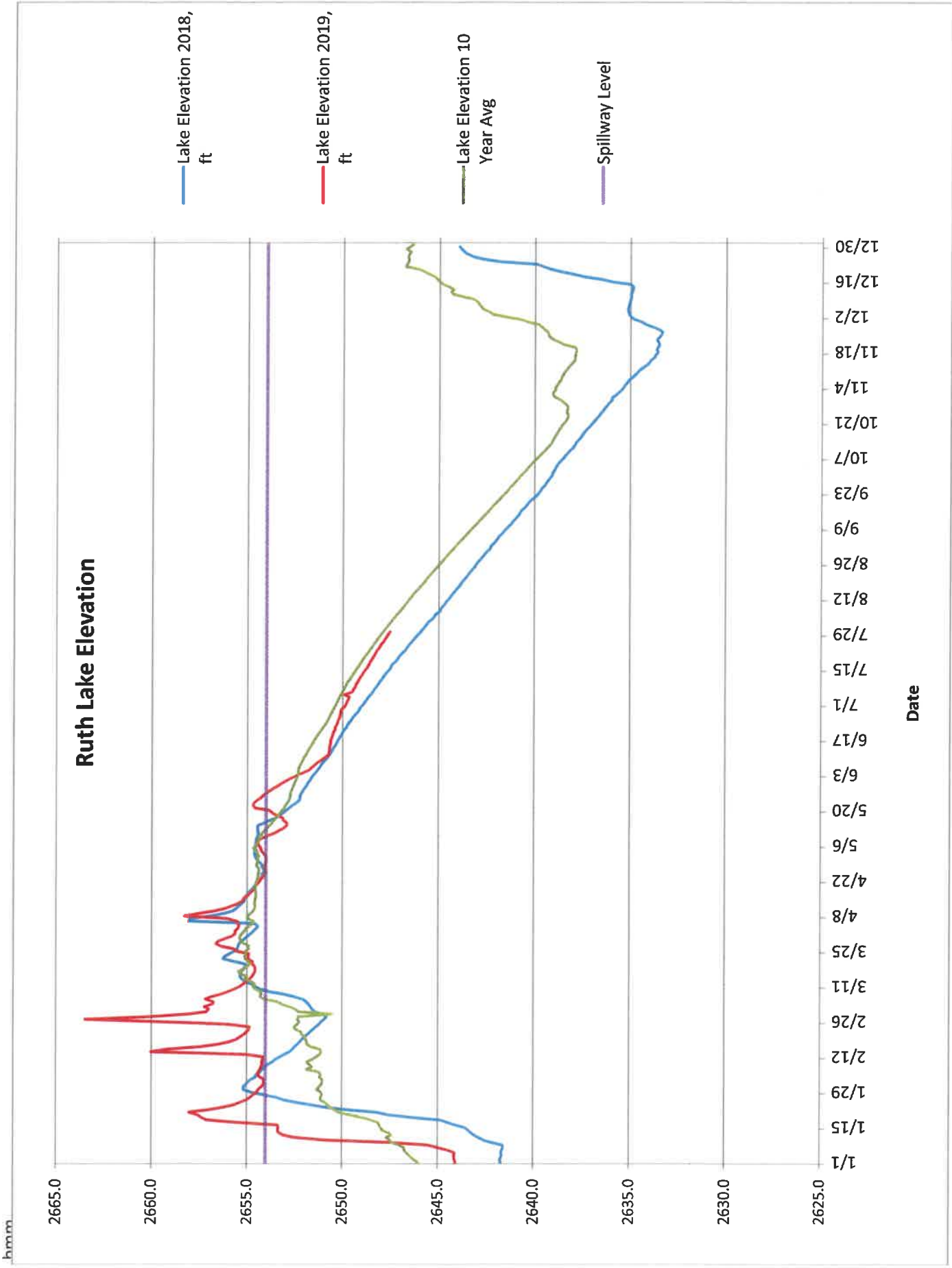
Upper Mad River, Ruth Lake, and Hydro Plant

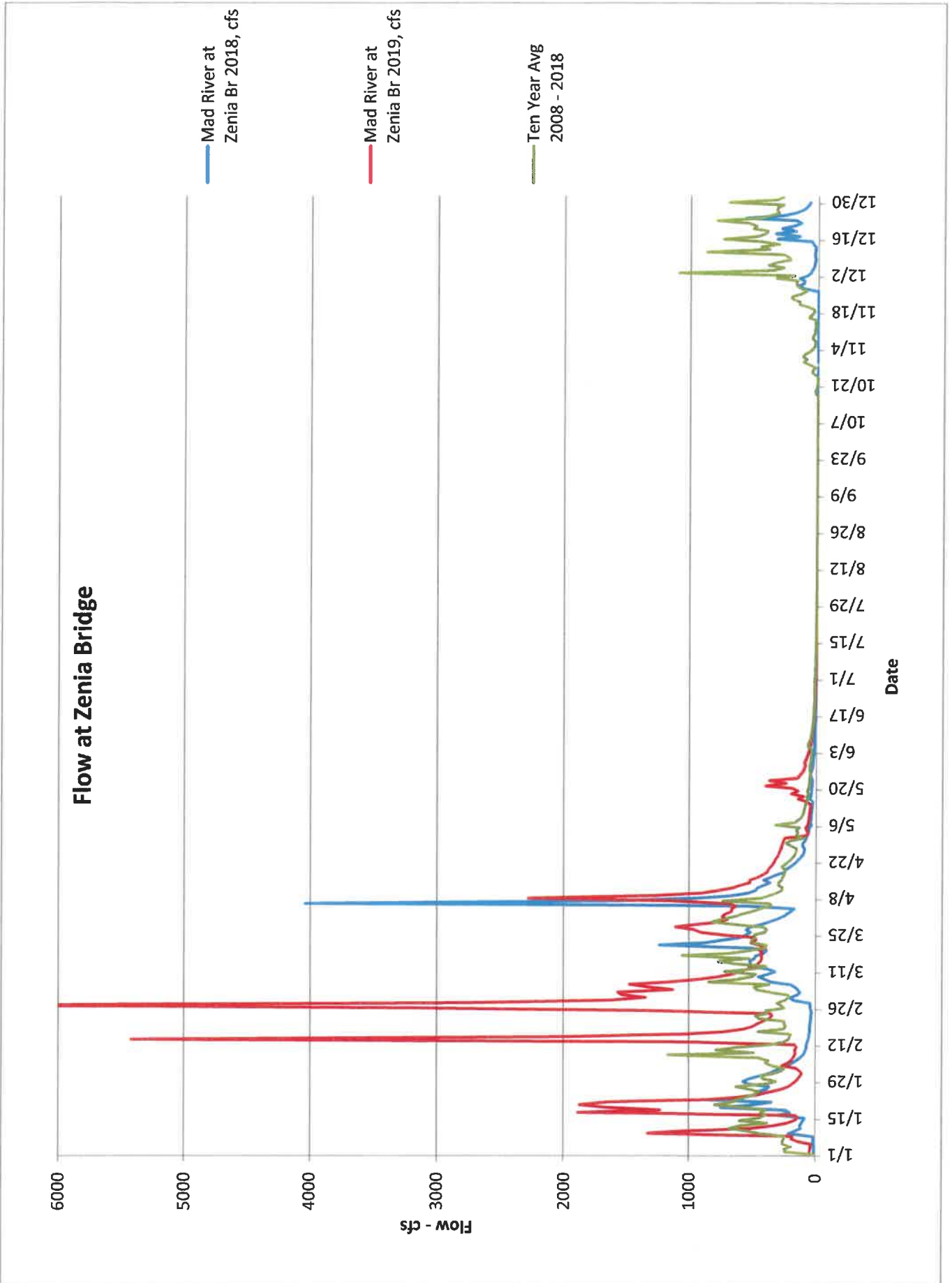
1. The flow at Mad River above Ruth Reservoir (Zenia Bridge) averaged 3 cfs. The low flow of 0 cfs began on July 24th and the high flow of 10 cfs was on July 1st.
2. The conditions at Ruth Lake for the month of July were as follows:
 - a. The lake level on July 31st was 2647.54 feet which is:
 1. 2.55 feet lower than June 30th, 2019
 2. 1.68 feet higher than July 31st, 2018
 3. 2.56 feet lower than the ten year average
 4. 6.46 feet below the spillway
3. There was no recorded rainfall for July at Ruth Headquarters.
4. Ruth Hydro produced 153600 KWh. The hydro plant ran all month with no outages.
5. The discharge from the lake averaged 43 cfs with a high of 44 cfs on July 3rd.

Lower Mad River, Winzler Control, and TRF

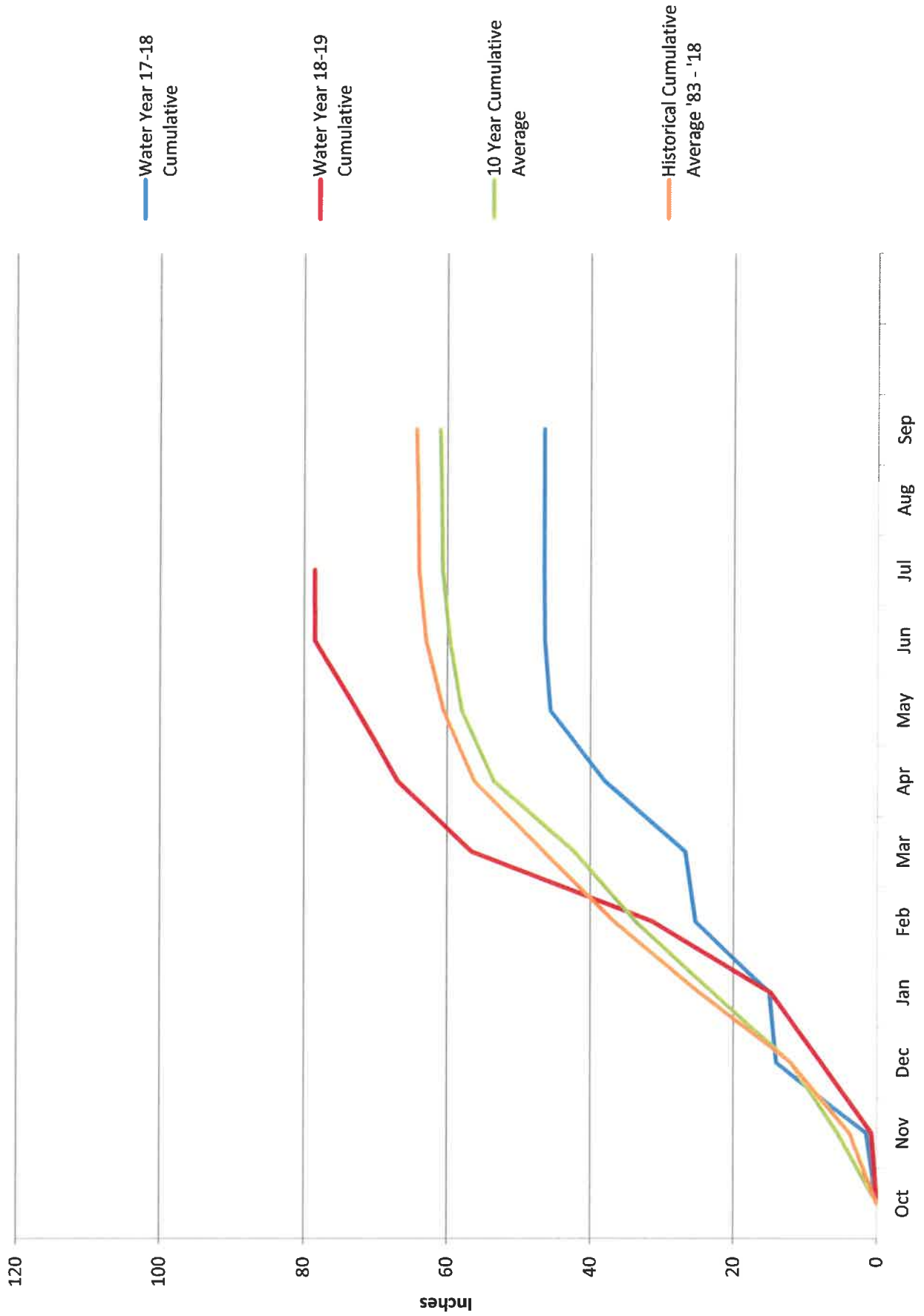
6. The river at Winzler Control Center for July had an average flow of 121cfs. The river flow reached a high flow of 161 cfs on July 1st.
7. The domestic water conditions were as follows:
 - a. The monthly turbidity average was 0.18 NTU, which meets Public Health Secondary Standards.
 - b. As of July 30th, we pumped 284.124 million gallons at an average of 6.657 MGD.
 - c. The maximum metered daily municipal customer use was 11.121 MGD on July 20th.
8. July 2nd – Eureka Humboldt Fire Extinguisher on site maintaining all District fire extinguishers
9. July 10th – Three of Essex staff attended a Basic Electrical Concepts training by RCAC in Fortuna
10. July 11th & 12th – GHD onsite doing another round of cathodic protection testing

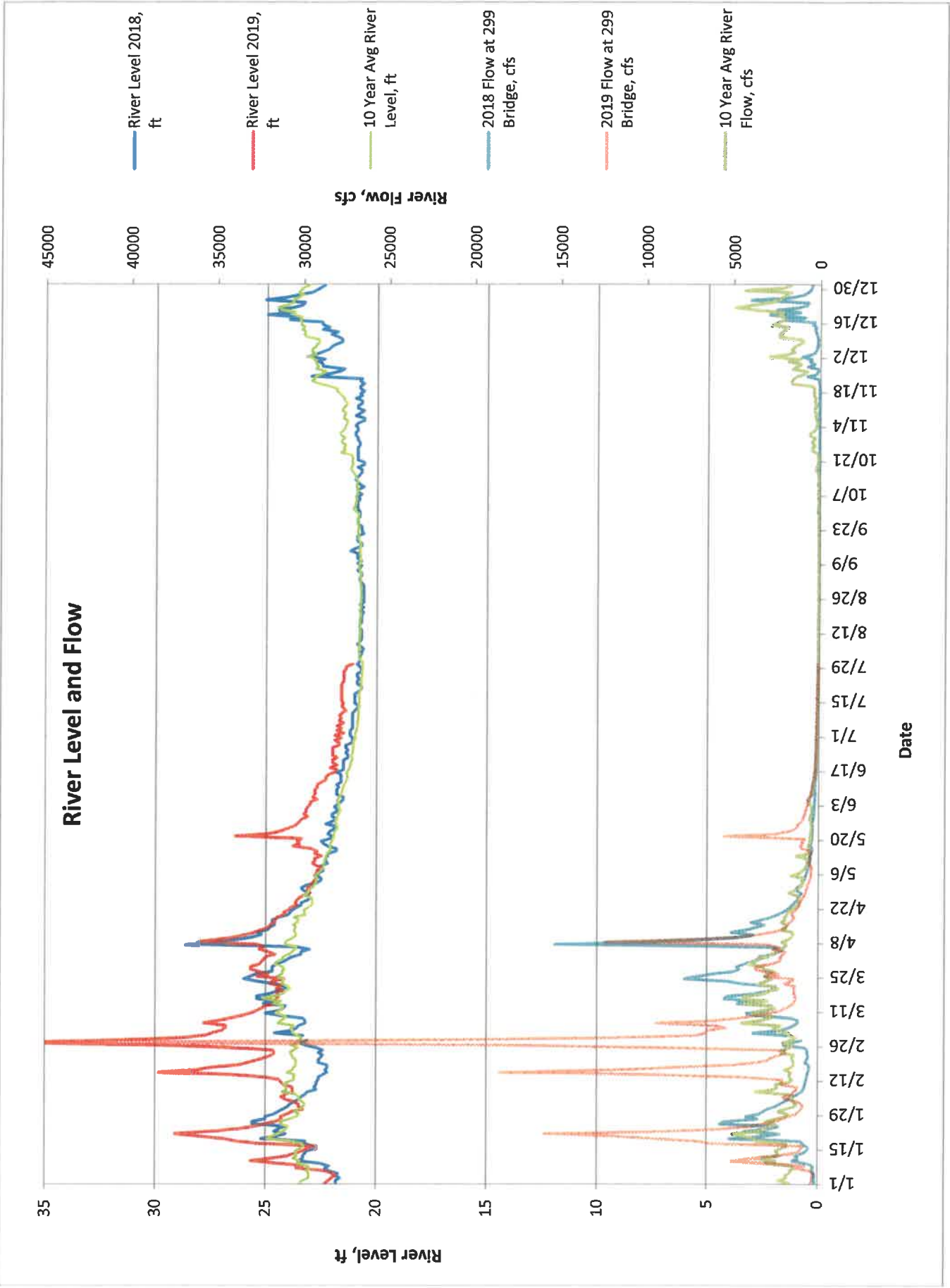
11. July 16th – Collector 1 taken off line for Electrical upgrade.
12. July 18th – SB198 Safety meeting
13. July 19th – Ruth Joint Board meeting
14. July 23rd – Quarterly radio test with Trinity County dispatch.
15. July 25th – Ryan did the Ruth Hydro Protective Relay upgrade project walk through with contractor
16. July 26th – Taber Geo Technical was on-site to do borings for 12 Kv switchgear project
17. July 31st – Safety meeting – Respirator Safety and fit testing.
18. Current and Ongoing Projects
 - a. Collector 1 Transformer and switchgear upgrade project nearly complete.
 - b. Ruth Bunkhouse remodel – We have decided to build the handrails with District staff instead of doing a change order. Handrails are complete and we just have a 3’x 6’ landing to finish at the bottom of the steps. Upon completion we will take photos and send them to Trinity County and the contractor so the project can be closed out. The Contractor has also finished the punch list items.
 - c. Maintenance is working on 3 large valve replacements and 1 new valve installation. 3 – 30” valves and 1-24” valve.





Ruth Rainfall - Water Year 2018-2019





1. Surplus equipment

- a. We would like to surplus the transformer that was replaced on Collector 1.

ACWA



ACWA 2019 Fall Conference & Exhibition

December 3 - 6, 2019 | Manchester Grand Hyatt San Diego

REGISTRATION, MEALS AND HOTEL PRICING SHEET



REGISTER ONLINE

Register online by **November 8, 2019** at www.acwa.com to take advantage of the advance pricing.



REGISTER ON SOMEONE'S BEHALF

Select from a list of people affiliated with your company in your account. If the registrant is not listed, you will need to create a Portal profile for the registrant before registering.

REGISTRATION OPTIONS <i>Advantage pricing applies to ACWA public agency members, associates & affiliates. Standard pricing applies to non-members of ACWA.</i>	ADVANCE DEADLINE: 11/8/19		ONSITE	
	ADVANTAGE	STANDARD	ADVANTAGE	STANDARD
Full Conference Registration & Meals Package	\$725	N/A	N/A	N/A
Full Conference Registration Only (meals sold separately)	\$580	\$870	\$600	\$890
One-Day Conference Registration (meals sold separately) Wednesday: Registration includes Welcome Reception on Tuesday evening -OR- Thursday: Registration includes ability to purchase a ticket for Friday breakfast	\$345	\$520	\$365	\$540
Guest Conference Registration (meals sold separately) Guest registration is not available to anyone with a professional reason to attend.	\$75	\$75	\$75	\$75
MEAL FUNCTIONS	ADVANCE		ONSITE	
Wednesday Opening Breakfast - December 4	\$50		\$55	
Wednesday Luncheon - December 4	\$55		\$60	
Thursday Networking Continental Breakfast - December 5	\$40		\$45	
Thursday Luncheon - December 5	\$55		\$60	
Thursday Dinner - December 5	\$70		\$75	
Friday Breakfast - December 6	\$50		\$55	

HOTEL INFORMATION

You must be registered for the ACWA conference in order to receive hotel reservation information and conference special room rate. **Conference special rate is available August 19 - November 8**, based on availability.

HOTEL

Manchester Grand Hyatt San Diego
1 Market Place, San Diego, CA 92101

ROOM RATES

Single/Double \$209 per night*
Triple \$234 per night*

* Subject to the following taxes & fees:

Tax 10.5%, TMD 2% and CA State Assessment Fee \$1.63

Deadline for group rate is November 8, 2019

IMPORTANT DATES

For those **registering for conference prior to August 19**, hotel information will be provided via e-mail on August 19.

For those registering for conference from **August 19 to November 8**, your confirmation e-mail will include hotel reservation information and an opportunity to receive a conference special hotel rate.

QUESTIONS?

Contact us at (888) 666-2292

Cancellation deadline: November 8, 2019 4:30 p.m. (PST)

Conference terms and conditions available at acwa.com in the event section.



ACWA 2019 Fall Conference & Exhibition

PRELIMINARY AGENDA

December 3 – 6, 2019 • San Diego

ACWA JPIA - MONDAY, DEC. 2

- 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, DEC. 3

- 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 – 5:00 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
- 1:00 – 3:00 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, DEC. 4

- 7:30 AM – 5 PM**
- Registration
- 8:00 – 9:45 AM**
- Opening Breakfast (*Ticket Required*)
- 8:30 AM – Noon & 1:30 – 6:00 PM**
- Exhibit Hall
- 10:00 – 11:30 AM**
- Attorneys Program
 - Energy Committee Program
 - Exhibitor Demos
 - Finance Program
 - Region Issue Forum
 - Statewide Issue Forum
 - Water Industry Trends Program
- 11:30 – 11:45 AM**
- Networking in the Exhibit Hall
- 11:45 AM – 2:00 PM**
- General Session Luncheon (*Ticket Required*)
- 2:15 – 3:30 PM**
- Attorneys Program
 - Communications Committee Program
 - Energy Committee Program
 - Exhibitor Case Study
 - Region Program
 - Statewide Issue Forum
 - Water Industry Trends Program
- 3:45 – 5:00 PM**
- Ag/Water Quality Committee
 - Aquatic Resources Subcommittee
 - Exhibitor Case Study
 - Finance Program
 - Local Government Committee
 - Statewide Issue Forums
 - 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, DEC. 5**
- 7:30 AM – 4 PM**
- Registration
- 7:45 – 9:15 AM**
- Regions 1–5 Membership Meetings

8:00 AM – Noon

- Exhibit Hall
- 8:00 – 9:15 AM**
- Networking Continental Breakfast, Exhibit Hall (*Ticket Required*)
- 8:30 – 10:45 AM**
- Ethics Training (AB 1234) - *Limited Seating*
- 9:30 – 11:00 AM**
- Attorneys Program
 - Exhibitor Demos
 - Finance Program
 - Region Issue Forum
 - Statewide Issue Forum
 - Water Industry Trends Program
- 11:00 – 11:30 AM**
- Prize Drawings in the Exhibit Hall
- 11:45 AM – 2:00 PM**
- General Session Luncheon (*Ticket Required*)
- 2:15 – 3:15 PM**
- Attorneys Program
 - Exhibitor Case Studies
 - Federal Issues Forum
 - Statewide Issue Forum
 - Water Industry Trends Program
- 3:30 – 5 PM**
- Regions 6–10 Membership Meetings
- 6:00 – 7:00 PM**
- Outreach Reception
- 7:00 – 10:00 PM**
- Dinner & Entertainment (*Ticket Required*)

FRIDAY, DEC. 6

- 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, DEC. 5

- 6:45 – 8:30 AM**
- San Joaquin Valley Agricultural Water Committee

All conference programs are subject to change.

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

To: Board of Directors
From: John Friedenbach
Date: July 23, 2019
Subject: ACWA JPIA 2019 Wellness Grant



Last year the District applied for and received a wellness grant. Employees received a cookbook titled "How Not to Die" that included over one-hundred recipes to help prevent and reverse disease. The cookbook was well received and some even purchased additional copies for family and friends.

Based on employee feedback, this year we applied for a grant to allow employees to purchase exercise apparel and accessories to promote obtaining 150 minutes of exercise per week. (See attached letter, page 2)

The District was once again successful in obtaining an ACWA JPIA Wellness Grant. Due to the overwhelming grant application responses ACWA JPIA received this year, funding amounts were reduced to 90% of the amount requested. (See attached letter, page 3-4). Each employee will be reimbursed up to \$36 after submittal of receipt(s) for fitness item(s).

The Wellness Grant is greatly appreciated by our District and our employees as we strive to maintain a safe and healthy work environment. Happy, healthy employees are more productive at the workplace and at home, creating a better life balance.

**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**BOARD OF DIRECTORS**

SHERI WOO, PRESIDENT

NEAL LATT, VICE-PRESIDENT

J. BRUCE RUPP, SECRETARY-TREASURER

BARBARA HECATHORN, DIRECTOR

MICHELLE FULLER, DIRECTOR

GENERAL MANAGER

JOHN FRIEDENBACH

June 14, 2019

Jackie Rech
Employee Benefits Account Manager
ACWA JPIA
Via email: jrech@acwajpia.com

RE: 2019 ACWA JPIA Wellness Grant Application

Dear Ms. Rech,

Type 2 diabetes is the most common form of diabetes and affects over 30 million Americans, according to the US Centers for Disease Control and Prevention, and it accounts for 90-95 percent of diabetes cases. To reduce the risk of diabetes, it is recommended that adults exercise at least 150 minutes per week in addition to eating healthy.

Last year, we used our grant funds to purchase "How Not to Die" cookbooks for our employees to promote healthy eating. We received good feedback from our employees.

This year, we would like promote our employees obtaining at least 150 minutes of exercise per week by granting them \$40 towards exercise apparel such as a flip belt (for running), yoga gear, arm belt for their cell phone, athletic shoes etc.to achieve this goal.

We will request our employees purchase their items and provide us a receipt within 60 days of receipt of the grant.

Attached is the grant application and the W-9 per grant requirements. If you have any questions, please let me know.

Sincerely,



John Friedenbach
General Manager



July 3, 2019

H.B.M.W.D. JUL 17 2019

Chris Harris - harris@hbmwd.com
John Friedenbach - friedenbach@hbmwd.com
Humboldt Bay Municipal Water District

Recvd 5 \$20 Amazon
Gift cards

RE: ACWA JPIA 2019 Wellness Grant

Dear Chris and John,

Congratulations! The 2019 Wellness Grant Application for Humboldt Bay Municipal Water District has been approved in the amount of \$996.

Due to an overwhelming response this year, it was necessary for us to reduce the amounts awarded to 90% of the amount requested. Eighty percent of the amount awarded will be sent by check and 10% of the amount will be sent as Amazon gift card(s). The gift cards are in \$20 increments. They can be used to incentivize wellness participation (e.g. given to wellness participants as prizes), or can be used to purchase wellness goods for your district.

We will send a check directly to Humboldt Bay Municipal Water District in the amount of \$896 within the next 30 days. Amazon gift card(s) totaling \$100 will be sent in a padded envelope under separate cover. Please note that the gift cards are not replaceable by Amazon or the JPIA if they are lost or stolen.

For your convenience, we are providing the funds in advance. Please follow the guidelines below to ensure proper use and documentation of wellness grant funds.

- Please save your receipts for your purchases. Once you have used all of the funds, submit them to the JPIA at jrech@acwajpia.com. If you use the gift cards as prizes and give them directly to participants, please just note that when sending in your other receipts. All funds must be used by 6/1/2020.
- If you are interested in engaging a speaker from Anthem Blue Cross for your wellness program, please let me know and I will put you in touch with the appropriate contact at Anthem. You will pay the speaker directly using your wellness funds.
- Safety equipment, services, and training are not considered eligible wellness grant expenses.



- Luncheons for staff will only be considered a reimbursable wellness grant expense if the luncheon is composed of healthy food choices, and/or has a wellness component (e.g. a wellness speaker or wellness activity).
- Teambuilding events, while worthwhile, are not considered eligible wellness grant expenses, unless there is a fitness, nutrition or similar health component.

If you have any questions regarding your grant please contact me at (916) 474-1773.

Thank you for your participation.

A handwritten signature in cursive script, appearing to read "JR", is positioned above the typed name.

Jackie Rech
Employee Benefits Account Manager

Sherrie Sobol

From: Ana Javid <AnaJ@acwa.com>
Sent: Tuesday, July 23, 2019 1:01 PM
To: undisclosed-recipients:
Subject: ACWA 2020-2021 Committee Consideration Process



MEMORANDUM

July 23, 2019

TO: ACWA MEMBER AGENCY BOARD PRESIDENTS
ACWA MEMBER AGENCY GENERAL MANAGERS

FROM: Brent Haste, ACWA PRESIDENT

SUBJECT: ACWA COMMITTEE APPOINTMENT CONSIDERATIONS FOR THE 2020-2021 TERM

PLEASE RESPOND BY SEPTEMBER 30, 2019

Thank you for your involvement with ACWA. As you know, Committees are an integral part of ACWA's activities and policy development. With the end of the current Committee term fast approaching, it is time again to request 2020-2021 Committee nominations from ACWA members. All Committees will be reconstituted following the election of new officers (ACWA's President / Vice-President) at the 2019 ACWA Fall Conference.

In submitting names for consideration, please do so with the understanding that Committees need active, involved individuals able to expend the time and provide their expertise, if appointed. Please keep in mind that the district is responsible for all costs associated with the participation of its representatives on Committees.

The following information is available at [ACWA's website](#) or by clicking on each link.

- [ACWA Policy Committee Composition](#)

- [ACWA Committee Consideration Form](#)
- [ACWA Committee Consideration Process Timeline](#)

If you would like to reference current Committee members serving on a ACWA Committee please click [here](#).

All correspondence and forms regarding Committee appointments must be submitted to the ACWA office no later than September 30, 2019 to be eligible for consideration. Committee appointments will be made by the incoming ACWA President in December. Please contact Interim Business Services Specialist, Petra Rice, at petrar@acwa.com or (916) 441-4545, if you have any questions concerning the Committee appointment process.

We appreciate your timely attention to this matter.

Thank you,

A handwritten signature in cursive script that reads "Brent Hastey". The signature is written in black ink and is positioned above the printed name.

Brent Hastey, ACWA President

HOW TO GET INVOLVED IN A COMMITTEE

Members interested in serving on committees are encouraged to review the information below.

ACWA Policy Committee Composition

ACWA Committee Consideration Form

ACWA Committee Consideration Process Timeline

The committee appointment process for the 2020-2021 term will kick off July 17.

For questions about the committee appointment process, please contact ACWA Business Services Specialist, Petra Rice at (916) 441-4545.

ACWA's Committees

Agriculture Committee

Business Development Committee

Communications Committee

Energy Committee

Federal Affairs Committee

Finance Committee - *Bruce is Vice-Chair*

Groundwater Committee

Legal Affairs Committee

Local Government Committee

Membership Committee *Bruce on committee*

State Legislative Committee

Water Management Committee

Water Quality Committee

ACWA COMMITTEE COMPOSITION

COMMITTEE

LIAISON

Agriculture Committee – Standing/Unlimited

Meetings: 2-3 times a year

The Agriculture Committee makes recommendations to the Board of Directors, State Legislative Committee, Federal Affairs Committee or other committees, as appropriate, regarding agricultural issues affecting the interests of ACWA and its members. This newly-formed committee is currently being assembled.

Adam Borchard
Regulatory Advocate
adamb@acwa.com

Business Development Committee – Standing/Unlimited

Meetings: 2 times a year

The Business Development Committee develops and recommends to the Board of Directors programs and activities to be provided or administered by the association that generate non-dues revenue and provide a service or benefit to association members.

Paula Currie
Director of Business Development & Events
paulac@acwa.com

Communications Committee – Standing/Limited (40 maximum)

Meetings: 4 times a year

The Communications Committee develops and recommends to the Board of Directors and ACWA staff regarding communications and public affairs programs. The committee promotes sound public information and education programs and practices among member agencies. It prepares and distributes materials for use by member agencies in their local outreach efforts. It also provides input and guidance to ACWA's Communications Department.

Heather Engel
Director of Communications
heathere@acwa.com

Energy Committee – Standing/Unlimited

Meetings: 2 times a year

The Energy Committee recommends policies and program to the Board of Directors, the State Legislative Committee and the Federal Affairs Committee as appropriate.

Chelsea Haines
Regulatory Advocate II
chelseah@acwa.com

Federal Affairs Committee – Standing/Limited (5 Per Region)

Meetings: 2 times a year

The Federal Affairs Committee coordinates with other ACWA committees regarding input on federal issues before both Congress and the federal administrative branches.

David Reynolds
Director of Federal Affairs
direvns@sso.org

Finance Committee – Standing/Limited (2 Per Region – 1 Region Chair or Vice Chair; 1 with financial experience)

Meetings: 4-5 times a year

The Finance Committee makes recommendations to the Board of Directors regarding annual budgets, investment strategies, annual audits and auditor selection, dues formula and schedule, and other financial matters.

Fili Gonzales
Director of Finance & Business Services
fili@acwa.com

Groundwater Committee – Standing/Unlimited

Meetings: 4 times a year

The Groundwater Committee makes recommendations to the Board of Directors on groundwater policy issues. The committee also monitors state and federal regulations and legislation affecting the quality and management of groundwater, conducts studies and gathers data on groundwater issues, develops policies regarding groundwater management and coordinates with other committees on groundwater issues.

Dave Bolland
Director of State Regulatory Relations
daveb@acwa.com

Legal Affairs Committee – Standing/Limited (45 Maximum)

Meetings: 2-3 times a year

The Legal Affairs Committee acts on requests for assistance on legal matters of significance to ACWA member agencies. It also reviews proposed ACWA bylaw revisions and works with staff to produce publications to assist member agencies in complying with state and federal laws. The committee files amicus curiae filing on important cases, comments on proposed regulations and guidelines of state agencies such as the Fair Political Practices Commission and monitors and engages in water rights waters of interest to member agencies.

**The committee shall be composed of between 34 and 44 attorneys, each of whom shall be, or act as, counsel for a member of the Association.*

Kris Anderson
Legislative Advocate I
krisa@acwa.com

Local Government Committee – Standing/Limited (3 Per Region)

Meetings: 4 times a year

The Local Government Committee makes recommendations to the Board of Directors and the State Legislative Committee on local government matters affecting water agencies, including planning issues, local government organization, and finance. The committee also gathers and disseminates information on the value of special districts, and shares information promoting excellence in local government service delivery.

Adam Quiñonez
*Director of State
Legislative Relations*
adamq@acwa.com

Membership Committee – Standing/unlimited

Meetings: 2 times a year

The Membership Committee makes recommendations to the Board of Directors regarding membership policies, eligibility and applications for membership. The committee assists staff in developing membership recruitment and retention programs and reviews and makes recommendations to the Finance Committee regarding an equitable dues structure.

Tiffany Giammona
*Director of Member
Outreach &
Engagement*
tiffanyg@acwa.com

State Legislative Committee – Standing/Limited (4 Per Region)

Meetings: 10-12 times a year

The State Legislative Committee reviews relevant introduced and amended legislation, and develop positions and provide recommendations to the Board of Directors on ballot measures and other major statewide policy issues. The committee also works with staff amendments to bills and provides director for staff on legislative matters.

Adam Quiñonez
*Director of State
Legislative Relations*
adamq@acwa.com

Water Management Committee – Standing/Limited (4 Per Region)

Meetings: 4 times a year

The Water Management Committee makes recommendations to the Board of Directors on policy and programs related to water management. The committee reviews and recommendation positions on legislation and regulations as requested by other committees. The committee also assists in gathering and disseminating information regarding agricultural and urban water management, water conservation and water use efficiency, development and use of water resources, wastewater treatment and water recycling and reuse.

Dave Bolland
*Director of State
Regulatory Relations*
daveb@acwa.com

Water Quality Committee – Standing/Unlimited

Meetings: 4 times a year

The Water Quality Committee makes recommendations to the Board of Directors, the State Legislative Committee and the Federal Affairs Committee on policy and program regarding water quality issues. The committee promotes cost-effective state and federal water quality regulations and provides a forum for members to work together to develop and present unified comments on water quality regulations. The committee also develops and recommends positions and testimony on water quality regulatory issues.

Adam Borchard
Regulatory Advocate
adamb@acwa.com



PLEASE PRINT LEGIBLY

Agency Name (DO NOT use acronyms or abbreviations)	Phone
Agency Address	City, State & Zip

**BELOW PLEASE LIST ALL THOSE INTERESTED IN BEING ON ACWA COMMITTEES FOR YOUR AGENCY.
 FOR ADDITIONAL RECOMMENDATIONS PLEASE FILL OUT ANOTHER FORM.**

**If an individual is not an agency employee or director, please indicate company affiliation.*

Name	Title/Company*	Email Address
Committee 1st Choice	Committee 2nd Choice	Committee 3rd Choice
Name	Title/Company*	Email Address
Committee 1st Choice	Committee 2nd Choice	Committee 3rd Choice
Name	Title/Company*	Email Address
Committee 1st Choice	Committee 2nd Choice	Committee 3rd Choice
Name	Title/Company*	Email Address
Committee 1st Choice	Committee 2nd Choice	Committee 3rd Choice
Name	Title/Company*	Email Address
Committee 1st Choice	Committee 2nd Choice	Committee 3rd Choice
Name	Title/Company*	Email Address
Committee 1st Choice	Committee 2nd Choice	Committee 3rd Choice

Signature <i>(Agency/District General Manager or Board President signature required)</i>	Title	Date
--	-------	------

QUESTIONS?
 Contact Business Services Specialist Petra Rice
 at petrar@acwa.com or (916) 441-4545

910 K Street, Suite 100
 Sacramento, CA 95814
www.acwa.com

2019 ACWA Committee Appointment Process Timeline 2020-2021 Term

- July 17:** **COMMITTEE CONSIDERATION FORMS EMAILED**
- Email Agency General Managers and Board Presidents:
 - List of agency staff and directors who currently serve on an ACWA Committee
 - Committee Composition
 - Committee Consideration Form
 - 2020-2021 Committee Timeline
- July 24:** **EMAIL NOTIFICATION TO CURRENT COMMITTEE MEMBERS**
- Current committee members notified that committee process has began
 - All current committee members **MUST** submit a Committee Consideration Form to be considered for reappointment
- September 30:** **COMPLETED CONSIDERATION FORM DEADLINE**
- All committee consideration forms **due by September 30**
 - Any consideration forms submitted after September 30 will be added to the waiting list and considered after ACWA President makes the initial committee appointments for the term
- October 25:** **ACWA REGION CHAIR AND VICE CHAIR CONFERENCE CALL**
- ACWA staff will hold a conference call with newly elected Region Chair and Vice Chairs to review 2020-2021 Committee recommendation process
 - Consideration forms compiled and submitted to incoming Region Chair and Vice Chair
- November 15:** **CHAIR AND VICE CHAIRS RECOMMENDATION DEADLINE**
- No Region recommendations will be accepted after November 15
- December 5:** **RECOMMENDATIONS GIVEN TO ACWA PRESIDENT**
- Incoming ACWA President will receive Region Chair and Vice Chairs recommendations along with all consideration forms at ACWA Fall Conference
- December 16:** **ACWA PRESIDENT APPOINTS MEMBERS OF COMMITTEES**
- Incoming ACWA President submits all appointments to ACWA Staff
- December 31:** **ACWA WILL NOTIFY COMMITTEE MEMBERS OF APPOINTMENTS**
- Letters emailed to members who have been appointed to serve on a committee for the 2020-2021 term
 - Letters emailed notifying those who were not appointed to a committee



Registration Now Open!



**ACWA Region 5 Program
Water Supply & Reliability:
*Agencies Working Together for
Bay Area Regional Reliability*
September 5, 2019
Online Registration
Deadline: August
30, 2019**

Join ACWA Region 5 for a one-day program focusing on northern ACWA Region 5. The day will begin with updates from San Francisco Public Utilities Commission, East Bay Municipal Utility District, Contra Costa Water District, Alameda County Water District, Valley Water and Zone 7 on their water supplies and current supply projects that are independent or with non-Bay Area stakeholders.

The afternoon program will highlight of Bay Area Regional Reliability projects underway through collaborations of local agencies. Highlights will include the expansion of Los Vaqueros reservoir, a water market program with multiple agencies and updated information regarding Pachecho reservoir and more.

Preliminary agenda available soon.

RREDC/RCEA

Sherrie Sobol

Subject: FW: Terra-Gen Humboldt Wind Energy Project, County of Humboldt Public Work Case No. 2019-014

From: **Bryan Berthiaume** <bryan@ffccalifornia.com>

Date: Wed, Jul 31, 2019 at 2:41 PM

Subject: RE: Terra-Gen Humboldt Wind Energy Project, County of Humboldt Public Work Case No. 2019-014

To: Dewald, Karina@DIR <KDewald@dir.ca.gov>, efennell@co.humboldt.ca.us <efennell@co.humboldt.ca.us>, dmiller@trinidad.ca.gov <dmiller@trinidad.ca.gov>, MWinkler@CityofArcata.org <MWinkler@cityofarcata.org>, sdaugherty@bluelake.ca.gov <sdaugherty@bluelake.ca.gov>, aallison@ci.eureka.ca.gov <aallison@ci.eureka.ca.gov>, rsmith@ci.ferndale.ca.us <rsmith@ci.ferndale.ca.us>, dglaser@ci.fortuna.ca.us <dglaser@ci.fortuna.ca.us>, cityhall@cityofriodellca.gov <cityhall@cityofriodellca.gov>, woo@hbmwd.com <woo@hbmwd.com>, contact@terra-gen.com <contact@terra-gen.com>

Cc: Bryan Berthiaume <bryan@ffccalifornia.com>, Jesse Jimenez <Jimenez@ffccalifornia.com>, Cory Allbritton <Allbritton@ffccalifornia.com>, Darbi Griffin <darbi@ffccalifornia.com>

Mr. Lau,

We respectfully request you re-open this request in connection with our conversation.

We will assume you will notify all interested parties accordingly.

Thank you for your consideration.

Bryan Berthiaume, Executive Director

Foundation for Fair Contracting

3807 Pasadena Avenue, Suite 150

Sacramento, California 95821

Office (916) 487-7871; Fax (916) 487-0310; Direct (916) 549-6380

One Stop Solutions @ www.ffccalifornia.com



From: Dewald, Karina@DIR <KDewald@dir.ca.gov>
Sent: Tuesday, July 30, 2019 9:52 AM
To: Bryan Berthiaume <bryan@ffccalifornia.com>; 'efennell@co.humboldt.ca.us' <efennell@co.humboldt.ca.us>; 'efennell@co.humboldt.ca.us' <efennell@co.humboldt.ca.us>; 'dmiller@trinidad.ca.gov' <dmiller@trinidad.ca.gov>; 'MWinkler@CityofArcata.org' <MWinkler@CityofArcata.org>; 'sdaugherty@bluelake.ca.gov' <sdaugherty@bluelake.ca.gov>; 'aallison@ci.eureka.ca.gov' <aallison@ci.eureka.ca.gov>; 'rsmith@ci.ferndale.ca.us' <rsmith@ci.ferndale.ca.us>; 'dglaser@ci.fortuna.ca.us' <dglaser@ci.fortuna.ca.us>; 'cityhall@cityofriodelca.gov' <cityhall@cityofriodelca.gov>; 'woo@hbmwd.com' <woo@hbmwd.com>; 'contact@terra-gen.com' <contact@terra-gen.com>
Subject: Terra-Gen Humboldt Wind Energy Project, County of Humboldt Public Work Case No. 2019-014

Good Morning,

Please see the attached letter dated July 30, 2019.

Sincerely,

*Karina Dewald
Supervising Special Investigator
Department of Industrial Relations
Office of the Director - Legal Unit*

1515 Clay Street, Suite 701

Oakland, CA 94612

Tel: (510) 286-1209

Fax: (510) 286-1220

STATE OF CALIFORNIA

Gavin Newsom, Governor

DEPARTMENT OF INDUSTRIAL RELATIONS

Office of the Director - Legal Unit
1515 Clay Street, Suite 701
Oakland, CA 94612

Telephone: (510) 286-3800
Facsimile: (510) 286-1220



July 30, 2019

Via electronic mail and U.S. Mail

Bryan Berthiaume
Foundation for Fair Contracting
3807 Pasadena Ave., Ste. 150
Sacramento, CA 95821
bryan@ffccalifornia.com

RE: Terra-Gen Humboldt Wind Energy Project
County of Humboldt
Public Works Case No. 2019-014

Dear Mr. Berthiaume:

You have requested a public works coverage determination as to whether the proposed construction of Terra-Gen Humboldt Wind Energy Project (Project) is covered by the prevailing wage law. Coverage determinations are made with regard to "a specific project or type of work awarded or undertaken," and we do not issue advisory opinions. (See Lab. Code, § 1773.5, subd. (b).) After the review of the submitted documents, the Department of Industrial Relations has concluded that the project has not sufficiently advanced to avoid the prohibition on advisory opinions.

As part of your request, the sole document you provided was a Notice of Preparation of a Draft Environmental Impact Report issued by the County of Humboldt Planning & Building Department (Humboldt) dated July 31, 2018. Upon further research, AECOM prepared a draft environmental impact report (DEIR) for Humboldt dated April 2019. Humboldt then allowed the public to comment on the DEIR until June 14, 2019. Since then there has been no action taken on the project.

It appears that the project is still in its preliminary phases, and the project has not been awarded, undertaken, nor is it under contract. Based upon the information and documents provided, the Department is unable to identify the scope of the Project, determine the actual terms of the agreements, and verify funding sources. As a consequence, at this time, the Department cannot issue a determination because the Project does not rise to the level of an actual and specific project under Labor Code section 1773.5. As such, the Department will be closing the file and no further action will be taken by the Department in regards to the above-referenced project. However, the

Department would like to invite you to resubmit your request once the contract on the Project has been signed.

Sincerely,



Karina Dewald
Special Investigator

Redwood Coast Energy Authority 633 3rd Street Eureka, CA 95501	Board Member Estelle Fennell 825 5th St. Eureka, CA 95501 efennell@co.humboldt.ca.us
Board Member Estelle Fennell 825 5th St. Eureka, CA 95501 efennell@co.humboldt.ca.us	Board Member Dwight Miller 409 Trinity Street P.O. Box 90 Trinidad, CA 95570 dmiller@trinidad.ca.gov
Board Member (Board Chair) Michael Winkler 736 F Street Arcata, CA 95521 MWinkler@CityofArcata.org	Board Member Summer Daugherty 111 Greenwood Ave Blue Lake, CA 95525 sdaugherty@bluelake.ca.gov
Board Member (Vice Chair) Austin Allison 531 K Street Eureka, CA 95501 aallison@ci.eureka.ca.gov	Board Member Robin Smith 834 Main Street P.O. Box 1095 Ferndale, CA 95536 rsmith@ci.ferndale.ca.us
Board Member Dean Glaser 621 11th Street Fortuna, CA 95540 dglaser@ci.fortuna.ca.us	Board Member Frank Wilson 675 Wildwood Avenue Rio Dell, CA 95562 cityhall@cityofriodellca.gov
Board Member Sheri Woo 828 - 7th Street P.O. Box 95 Eureka, CA 95502 woo@hbmwd.com	Terra-Gen ATTN: Jim Pagano (Chief Executive Officer) 11455 El Camino Real, Suite 160 San Diego, CA 92130 contact@terra-gen.com



BOARD OF DIRECTORS MEETING AGENDA

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

June 27, 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 3:30 p.m. Notice of this meeting was posted on June 23, 2019. PRESENT: Vice Chair Austin Allison, Alternate Director Chris Curran, Estelle Fennell, Dwight Miller, Robin Smith, Frank Wilson, Chair Michael Winkler, Sheri Woo. ABSENT: Dean Glaser. STAFF PRESENT: General Counsel Nancy Diamond; Power Resources Director Richard Engel, The Energy Authority Client Services Specialist Jaclyn Harr, Executive Director Matthew Marshall, Account Services Manager Mahayla Slackerelli, Clerk of the Board Lori Taketa.

REPORTS FROM MEMBER ENTITIES

Director Smith reported that opposition to Humboldt Wind's Monument Ridge wind energy project is strong in Ferndale and that RCEA might want to send a representative to Ferndale to clarify the agency's position.

Director Woo reported that the Humboldt Bay Municipal Water District is meeting with the State Water Resources Control Board to move forward on dedicating a portion of the District's water rights to instream flow for fish and wildlife benefits.

Director Allison reported that the Eureka City Council elected not to opt up to RePower+ based on city staff's projections of the resulting increase to the city government's electricity costs. The Council approved a 100% renewable electricity by 2025 goal so the transition is only delayed.

Director Fennell reported that Humboldt County joined the Sonoma County Water Agency, California Trout, and the Mendocino Inland Water and Power Commission, in a notice of intent to file for an operation license for the Potter Valley Project, a regional approach to assuming PG&E's project. Director Fennell stated the importance of finding a two-basin solution to the Project's relicensing and of expanding regional membership to include tribes and other interested parties. Director Fennell will contact Executive Director Marshall about including an overview presentation by the County's consultant on a future RCEA Board meeting agenda.

Director Wilson reported that the Rio Dell City Council will appoint a candidate to replace a Councilmember who moved away from the city.

ORAL COMMUNICATIONS

Member of the public Walt Paniak of Arcata stated that an explanation of renewable energy credits should be added to the RCEA website.

CONSENT CALENDAR

- 3.1 Approve Minutes of May 23, 2019, Board Meeting.
- 3.2 Approve Disbursements Report.
- 3.3 Accept Financial Reports.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Miller, Fennell: Approve Consent Calendar items 3.1, 3.2 and 3.3.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: Glaser. Abstentions: None.

OLD BUSINESS

5.1 FY 2019-2020 Budget

Executive Director Marshall presented a staff report on the proposed annual budget, pointing out roughly \$4 million in construction costs for the airport microgrid project, which will be funded through a California Energy Commission grant, and a USDA loan to be repaid by RCEA using ratepayer funds. Electricity sales remain the largest source of revenue; wholesale power purchases are the largest expense.

The Energy Authority Client Services Specialist Jaclyn Harr reported on the Community Choice Energy program's power mix, on how the CCE program is meeting state renewable requirements well, and on factors impacting wholesale power costs.

The Directors discussed how regional and national, rather than global, energy issues such as Pacific Northwest precipitation and natural gas prices, affect RCEA's power procurement. Director Woo reported that the Board Finance Subcommittee examined program costs in detail as they reviewed the proposed budget and commended staff for preparing the budget document so the public can see what RCEA does.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Allison/Woo: Adopt the RCEA fiscal year 2019-2020 annual budget.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: Glaser. Abstentions: None.

5.2 Comprehensive Action Plan for Energy Update

Executive Director Marshall presented a staff report on updating the 2012 Comprehensive Action Plan for Energy (CAPE), which will include the Board-approved 100% renewable electricity by 2025 goal, input received from current countywide Climate Action Plan (CAP) development and community outreach, and consolidation of qualitative and still-current

quantitative strategies from RCEA's strategic planning documents. Findings from this update will inform the Community Choice Energy Program's next Integrated Resource Plan, which will be submitted to the CPUC by May 2020. Staff identified a need to refine high-level CAPE strategies, develop quantitative targets and milestones, determine targets for the power mix make up for the next ten years, and to work with the County to coordinate a community and stakeholder discussion around the many interconnections between forest lands and climate change mitigation.

The directors discussed how electric vehicle incentives are the only cap and trade auction proceeds to be distributed in Humboldt County to date, how the Board-approved goal of achieving 5% less greenhouse gas emissions than PG&E's power portfolio becomes moot when the program achieves 100% clean and renewable electricity in 2025, that building and transportation fuel switching can be included in the CAPE strategies and quantitative analyses; how PG&E's natural gas-powered Humboldt Bay power plant is the only back-up source of electricity during service interruptions to the transmission lines connecting the County to the rest of state grid at Cottonwood, the need for local renewable energy development given the restrictions of importing electricity on the Cottonwood lines, and the lack of non-fossil fuel-based local energy options other than wind and biomass.

Chair Winkler invited public comment.

Member of the public Scott Frazer stated that many local residents are producing more electricity than their homes require through solar panels, and that it is possible to produce a lot of energy locally on rooftops.

CCE customer and member of the public Diane Ryerson stated that she installed solar electric panels and a hot water thermal pump to stop using natural gas. Her definition of clean energy does not include biomass, which she stated produces carbon faster than can be sequestered. Ms. Ryerson would like to see alternate uses of forestry byproducts that keep carbon in the soil, a reduction in biomass energy and inclusion of offshore wind in the CCE power mix as soon as possible, and local energy storage. Given a choice between dirtier local or out-of-area clean energy, she prefers out-of-the-area clean energy.

Member of the public Walt Paniak of Arcata asked the directors to consider: health problems caused by emissions from diesel and natural gas cogeneration at the PG&E, Scotia and DG Fairhaven power plants; and the increasing cost of biomass as a fuel source as opposed to wind and solar, which are free.

Member of the public Dave Carter stated that the electric grid requires consistent 60hz frequency provided by large rotating machines with inertia in order to support wind and solar power. Both renewable energy sources lack this grid inertia and stable frequency. PG&E's Humboldt Bay Generating Station and the biomass plants provide these essential functions. Mr. Carter stated that while the local biomass plants are old and need upgrades to be cleaner, if the community moves away from biomass and loses the PG&E plant, there will be no grid inertia. With biomass, the community has a chance to regulate grid frequency locally without the PG&E plant.

Chair Winkler closed public comment.

5.3 Special District Risk Management Authority Board Election

Executive Director Marshall presented a staff report and recommendations to support the local candidate and the two incumbents.

The directors discussed the local candidate's qualifications, the possibility of assigning a director to research the candidates and the willingness to support the incumbents if they are performing well.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Allison, Smith: Defer consideration of the 2019 SDRMA Board of Directors election votes until the July 25 RCEA Board meeting.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: Glaser. Abstentions: None.

COMMUNITY CHOICE ENERGY (CCE) BUSINESS

Chair Winkler stated that a quorum was present to conduct CCE business.

OLD CCE BUSINESS

7.1 Community Choice Energy Updates on Rate Change, Regulatory Compliance and Public Disclosure (Information only)

Account Services Manager Mahayla Slackerelli reported that PG&E was implementing its third and presumably final rate adjustment for the year on July 1, and that RCEA customers will receive a 1% discount on PG&E's generation rate. The power charge indifference adjustment (PCIA) is also changing. Overall, electricity rates will increase slightly.

Staff Manager Slackerelli clarified that PG&E charges Community Choice Aggregators in its service area the PCIA because PG&E was required by the CPUC to enter into high-priced energy contracts in the past. PG&E expected to serve its customers into the future but as they moved to CCAs, removing load, PG&E was left "holding the bag." The PCIA helps PG&E honor those legacy contracts.

Power Resources Director Richard Engel reported that the CPUC is scrutinizing CCAs more closely as they become a larger segment among load serving entities and staff is coordinating with other CCAs, The Energy Authority and energy legal counsel Braun Blasing Smith Wynne to fulfil the increased state renewable energy portfolio filing requirements in a consistent manner. In order to obtain a greenhouse gas emissions factor for the public to use to compare the CCE program's different electricity sources, RCEA enrolled with The Climate Registry (TCR) and will eventually perform a third-party verified audit on greenhouse gas emissions as part of its emissions disclosure practices through TCR.

Upon inquiry by member of the public Ellen Golla about the 12% biomass figure for the RePower+ portfolio, staff clarified that biomass constituted 12% of the total 2016 energy

portfolio, a figure that was projected to increase to 24% with the addition of the DG Fairhaven procurement contract. However, in 2018 the plants' actual output was less than the full contract maximum so biomass' portfolio portion grew to only 20%. To keep the RePower+ power content mix consistent the amount of biomass in the RePower+ portfolio is being kept at 12%. Around 1% of RCEA customers have opted up to the RePower+ service, minimizing its impact on the total CCE program energy portfolio.

Chair Winkler closed public comment.

7.2 Energy Risk Management Plan Quarterly Report

The Energy Authority Client Services Specialist Jaclyn Harr reported on changes to the CCE program revenue and load forecasts since the last quarterly report in April. The current report incorporates more recent load forecast data and, with the adoption of a newer, more accurate method for assessing load, projects a 6.6% decrease in RCEA customer energy demand for 2019 and into the future, which will impact revenues.

Discussion ensued about how the PG&E rate changes have a positive influence on RCEA revenues and how summer weather projections, precipitation and hydropower availability affect electricity use and prices. Ms. Harr reviewed summer stress scenarios developed by CAISO, the organization that assesses whether California has sufficient energy resources to meet demand. Ms. Harr also reviewed California hydro conditions, their effect on power prices, and carbon-free power price increases due to a below-average hydropower year in the Pacific Northwest.

Chair Winkler invited public comment.

The directors discussed PG&E public safety power shutoffs and how they are more likely to affect customers in large electricity grid sections this summer during high winds, especially in central California, than system overload.

Chair Winkler closed public comment.

M/S: Fennell, Allison: Accept the Energy Risk Management Quarterly Report.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler. Noes: None. Absent: Glaser. Abstentions: Woo.

7.3 Renewable Power Request for Proposals Update

Director Woo recused herself from discussion of agenda item 7.3 due to a remote conflict of interest and left the dais at 5:14 p.m. Director Woo's conflict arises from her employment at SHN Engineers and Geologists, which performed work for Terra-Gen, of which Humboldt Wind, LLC is a subsidiary.

Power Resources Director Engel provided a staff report on the renewable energy request for proposals issued earlier this year which followed RCEA guiding document direction, specifically by the 2012 Comprehensive Action Plan for Energy, the RePower Humboldt strategic plan, and the CCE program's launch period guidelines, the latter of which set a

100% local renewable energy by 2030 goal, and the recent Board resolution revising the clean and renewable goal date to 2025. Director Engel described state mandates for renewable energy portfolio standards and long-term renewable energy contract duration, which also affect the CCE program's procurement. The request for proposal process, selection criteria, and reasons for selecting the finalists such as risk minimization based on projected prices, timing of other local power source availability and energy source diversification were described.

The directors discussed: how offshore wind, smaller scale feed-in tariff projects and biomass fit into RCEA's long-term procurement strategy; the standard industry practice of treating power purchase prices as proprietary information; how the combination of proposed power sources match fluctuating daily energy demands well; the portion of total projected load the proposed projects would meet until 2030; the limitations of total solar energy dependence; and the relative seasonal consistency of wind power.

Jaclyn Harr described in detail TEA's modeling and analysis of the different renewable energy proposals to determine the quantitative value of the projects and the different possible portfolio combinations. Ms. Harr stated that RCEA's financial outlook remains positive with the proposed power purchase agreements.

Upon inquiry by Director Miller, Ms. Harr stated that the projected cost savings from the three renewable energy contracts would result in net revenues increasing in future years as the projects come online, and the Board may choose to reduce customer electricity rates in the future.

The directors discussed concerns and potential benefits of locking in prices for long periods; how 15 to 20-year renewable energy contracts have become standard; high start-up costs for California energy projects due to environmental and permitting requirements; the difficulty for energy developers to get financing without longer term contracts; how the proposed contract prices are much lower than PG&E's long-term contracts with then-new technology renewable energy providers; and the state requirement to maintain a percentage of portfolio power purchase agreements of 10 years or longer to encourage new renewable energy development. The directors agreed to allow the finalist power producers a chance to speak.

Chair Winkler invited public comment.

Humboldt Wind Energy Project community liaison Natalynne DeLapp, speaking as a private citizen, stated that she was honored to work with the community on the Terra Gen project, that the wind project is evolving in response to community input to address cultural and biological impacts, and that she supports moving forward with this project which will provide tax revenue, new jobs and local renewable energy to meet greenhouse gas reduction goals.

Jim Zoellick, a Managing Research Engineer at the Schatz Energy Research Center who spoke as a private citizen, expressed support for the staff recommendation and stated that Humboldt County needs to develop local energy because the transmission system is inadequate to import enough electricity to meet the area's average, much less peak, needs. Mr. Zoellick outlined the technical and cost considerations making increased residential rooftop solar cost-prohibitive as a large-scale local renewable energy alternative. Mr. Zoellick stated his support for developing utility-scale wind energy with Terra-Gen at the proposed

location and acknowledged that there will be project impacts which the company is doing a good job of working with the community to mitigate. He added that it will be up to the County whether the project is permitted and that the biggest impacts the community is facing are from climate change, which the Terra Gen project can help address in a short time frame.

Schatz Energy Research Center Managing Research Engineer Dave Carter, who also spoke as a private citizen, commended RCEA for its 100% clean and renewable electricity by 2025 goal and expressed the necessity of incorporating the Terra Gen wind project into the CCE power mix. Mr. Carter stated that it was difficult to express this support because the Wiyot Tribe has opposed the project, and that it was important for RCEA and CCE customers to acknowledge that they are asking, because of the climate crisis, to take something from the Wiyot Tribe after many other things have been taken from them.

An unidentified member of the public inquired whether it was possible for the public to know the cost of Terra Gen's wind power compared to solar and small hydropower and whether the Board was aware of the pricing. Staff responded that while biomass power purchase prices were made public previously, it was normal industry practice to treat pricing information as confidential; that an ad hoc Board subcommittee could be formed to analyze pricing information on behalf of the Board; that the proposed project contract prices are lower than what the CCE program is currently paying for other renewable energy; and that, not counting grid congestion, fluctuating time of day power and other risk factors, industrial-scale solar energy is cheapest, then wind, then other renewables.

Member of the public Ellen Golla strongly encouraged local wind development and expressed support for contract negotiations with Terra Gen. She urged RCEA to counteract misinformation circulating about the project and stated that the genuine environmental concerns being raised can be addressed.

Director Miller requested that staff address the most frequently circulated rumors with accurate information that also explained the project's complexity and was informed that staff published a frequently asked questions section on the agency website's Power Procurement page. Director Miller further requested that RCEA consider compensating the Wiyot Tribe and the project neighbors for project impacts and expressed support for the staff recommendation.

Director Allison expressed support for the Terra Gen project and stated that while many of the project's negative commenters are older, younger generations must live with climate change repercussions. Director Allison stated the need to consider the bigger picture, the greatest means of benefitting the community, his hope that every community does all it can to reverse negative climate change impacts, and that there are community members supporting the project who are unable to participate in public meetings.

Director Fennell expressed support for negotiating with the three project finalists and stated that it is extremely important for supporters to present clear information in their public testimony to correct any misinformed narrative when the Humboldt County Planning Commission and Board of Supervisors consider the project permit, as other decision makers may not be as steeped in the climate crisis concept. Director Fennell stated that Terra Gen is trying to address the concerns that are being raised.

Director Wilson expressed support for moving forward with contract negotiations and agreement with staff's analysis. He stated that people need to consider what they will do if PG&E turns off the power and that the community must make trade-offs if it wants electricity.

Director Smith described the high level of unrest in the Ferndale community and stated that it is RCEA's responsibility to fully inform the public of the project's advantages and refute inaccurate statements with data.

Chair Winkler acknowledged concerns expressed by Mr. Carter and Directors Smith and Allison and stated that the majority of fossil fuel consumption in human history occurred during his lifetime, leaving his generation with a great responsibility. Chair Winkler expressed support for staff negotiation with the three companies, stated that the wind project presents an opportunity to keep energy dollars in the community, that impacts must be reduced until they are less than significant, and that if an onshore wind project is to be created in Humboldt County, there is no other location for it. For the longer term, Chair Winkler stated his desire to move away from reliance on outside companies for local renewable energy production.

Chair Winkler closed public comment.

M/S: Allison, Miller: Approve renewable energy RFP respondent short list of Terra-Gen LLC, Candela Renewables LLC, and Snow Mountain Hydro LLC and authorize staff to negotiate power purchase agreements to present to the Board for final approval.

The motion passed on a unanimous voice vote. Ayes: Allison, Curran, Fennell, Miller, Smith, Wilson, Winkler. Noes: None. Absent: Glaser. Abstentions: Woo.

Executive Director Marshall stated that public advocacy efforts were limited prior to Board approval and that staff resources could now be used to counter false energy-related information with factual information and engage the Ferndale and Scotia communities. Staff Director Marshall will contact Wiyot Tribe leaders directly to see if concerns can be mitigated.

Director Woo returned to the dais at 6:47 p.m.

Due to the late hour, the Board agreed to meet in closed session with legal counsel per Government Code Section 54956.9(d)(4), in re PG&E, Bankruptcy Court, 19-30088, Northern District of California, at the July 25 meeting.

Chair Winkler adjourned the meeting at 6:48 p.m.

Respectfully Submitted,

Lori Taketa
Clerk of the Board



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
 At the Prosperity Center 520 E Street, Eureka
July 22, 2019 at 6:30 pm
AGENDA

- I. **Call to Order & Flag Salute**
- II. **Approval of Agenda and Minutes**
 - A. Approval of Agenda for July 22, 2019
 - B. Approval of Minutes of the Board of Directors Meeting June 24, 2019
- III. **Public Input for non-agenda items**
- IV. **Program – Erik Heim, founder and CEO of Nordic Aquafarms – Overview of proposed Humboldt County land-based fish farm on the Samoa Peninsula**
- V. **Consent Calendar**
 - A. Acceptance of Agency-wide Financial Reports: No report pending closing of Fiscal Year
- VI. **Reports – No Action Required**
 - A. Loan Portfolio Reports: No report pending closing of Fiscal Year
 - B. Executive Director's Report
- VII. **Old Business**
 - A. Discussion and Possible Action on Draft of Policy Allowing Member Districts to Request Reimbursement for Mileage
- VIII. **New Business**
 - A. Consideration of Contract with the City and County of Denver for Marketing of Air Service for the Denver International Airport
 - B. Selection of Auditor
 - C. Discussion of RREDC By-Laws and Suggested Changes
- IX. **Member Reports**
- X. **Agenda/Program Requests for future Board of Directors Meetings**
- XI. **Closed Session: PUBLIC EMPLOYEE REAPPOINTMENT: Government Code Section 54957:**
 Title: Executive Director
- XII. **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.

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