



HUMBOLDT BAY MUNICIPAL WATER DISTRICT

Board of Directors Meeting

May 2019



Collector 2 Cable Car Shed Rebuild

MINUTES



HUMBOLDT BAY MUNICIPAL WATER DISTRICT
828 7th Street, Eureka



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April 16, 2019

A. **ROLL CALL**

President Woo called the meeting to order at 9:00 am. Director Hecathorn conducted the roll call. Directors Fuller, Hecathorn, Latt and Woo were present. Director Rupp was absent. General Manager John Friedenbach, Superintendent Dale Davidsen, Business Manager Chris Harris and Board Secretary Sherrie Sobol were also present. Pat Kaspari of GH&D, Paul Brisso of the Mitchell Law Firm and Michael O’Conner of R.J. Ricciardi, Inc. were present for a portion of the meeting.

B. **FLAG SALUTE**

President Woo led the flag salute.

C. **ACCEPT AGENDA**

On motion by Director Latt, seconded by Director Hecathorn, the Board voted 4-0 to accept the agenda.

D. **MINUTES**

Director Latt requested an addition to the minutes of March 14th meeting in the Annie & Mary Trail discussion listed under Management. The addition included comments made by Mr. Hank Seemann of the County in regards to Mr. Davidsen’s concerns about increased use of the park resulting in additional trash and restroom usage. On motion by Director Hecathorn, seconded by Director Fuller, the Board voted 4-0 to approve the Minutes of March 11, 2019 Emergency Board Meeting and March 14, 2019 Regular Meeting as modified.

E. **PUBLIC COMMENT**

A member of the public stated he was present to support someone who was going to make a public comment but was not there yet. He added that the Board room had a good atmosphere. President Woo stated she would reopen public comment if the person arrived prior to the 9:15 scheduled time set.

F. **CONSENT AGENDA**

President Woo requested the article on water tax in Item F3 be pulled. On motion by Director Latt, seconded by Director Hecathorn, the Board voted 4-0 to approve the Consent Agenda, less Item 3.

President Woo inquired how our local representatives voted the last time the water tax issue was up for vote. Mr. Friedenbach stated he would confirm the information and bring it back to the next meeting. He noted that he has participated in two meetings with local staff for Senator McGuire and Assemblymember Wood and discussed the water tax, and both have been cc’d on District correspondence on this issue, so both representatives should be aware of our concerns regarding the water tax. On motion by Director Fuller, seconded by Director Latt, the Board voted 4-0 to approve Consent Item F3.

G. **CORRESPONDENCE**

Letter from District submitting DSSMR

Mr. Friedenbach stated the 2018 Dam Safety Surveillance and Monitoring Report was submitted to FERC. This is an annual requirement and is related the Dam Safety Surveillance Monitoring Plan which is updated as needed.



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Letter from District to Humboldt County Planning Dept re: zoning

Mr. Friedenbach shared the letter to the Planning Department. He stated that most of the content was crafted by District legal counsel, Ms. Walker. President Woo stated she is glad special legal counsel is following this issue. Director Latt inquired if staff received any response yet. Mr. Friedenbach stated no response has been received.

Letter from Paul Brisso of The Mitchell Law Firm, LLP re: professional transition

District legal counsel Paul Brisso submitted a letter informing the District of his professional transition in 2019. Mr. Brisso was present to answer questions regarding this and express his appreciation for working with the District. He noted the long history that the Mitchell Law Firm has enjoyed with the District and hopes the District will continue this as he transitions most of his District work to Ryan Plotz, the newest partner at the firm. He stated he has much confidence in Mr. Plotz and will still be available to advise and assist him if needed. The Board asked several questions regarding the transition and stated they were sad to see him go. Mr. Brisso thanked the Board and stating he is not fully retiring, just not being involved as much in the day to day work and focusing more on mediation. After Mr. Brisso left, the Board continued discussion. Director Latt stated the firm does a good job and he has no qualms continuing with them. Director Hecathorn noted that Mr. Brisso will still be around as back up and she was comfortable staying with the firm. The Board concurred and agreed to continue the relationship with the firm, in particular Mr. Plotz.

Letter from DWR re: Notification of Fee Increase

DWR sent a letter regarding notification of fee increases effective July 1, 2019. The rates include a base rate plus a charge based on the height of the dam. Mr. Friedenbach stated the District advocated for consideration of dam revenue generation as an additional fee metric, not dam height as a basis for fees but it did not gain traction. Five years ago, the District paid roughly \$18,000 and last year \$29,000. With the new increase, the fees this year will be approximately \$45,000.

Letter from FERC re: Owner's Dam Safety Program Organizational Chart

Mr. Friedenbach shared the April 5, 2019 letter from FERC responding to our letter submitted to FERC on March 24, 2017. He, as District General Manager, is the designated Chief Dam Safety Coordinator and as such, FERC is requesting a resume from him. He noted that although it took FERC two years to respond, they now want a response within thirty days. The response will be provided within the thirty days.

Thank you letter from League of Women Voters

The League of Women Voters sent a nice handwritten thank you note for the presentation provided by Mr. Friedenbach. President Woo stated Mr. Friedenbach did very good job and the attendance at the meeting was good too.

H. CONTINUING BUSINESS

Water Resource Planning

Local Sales

Mr. Friedenbach attended a Nordic Aquafarms public forum at Humboldt State University hosted by the Fisheries department. He stated the presentation was good and about fifty people were in attendance. Nordic Aquafarms is planning on scheduling more town-hall type meetings. He also shared a letter from the County to the Governor's office requesting stated assistance for the aquaculture project. Mr. Friedenbach stated staff will also be meeting with representatives from Enviva tomorrow regarding potential water service if they decide to open a facility on the Samoa Peninsula. Enviva is a manufacturer of wood pellets.



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Mr. Friedenbach stated the District teamed up with the City of Blue to provide reusable water bottles to the students of Blue Lake Elementary for Earth Day. The water bottles have the District's name and Tap the Mad printed on the them. He provided each of the Directors with a bottle. Staff will also be receiving water bottles. Funds for the bottles are from the public education project budget.

Transport

The transport committee is scheduled to meet next week to discuss the concept of transport with staff from Redway CSD.

Instream Flow

President Woo provided a presentation the Humboldt Bay Symposium. Director Fuller added that many people approached her and thanked the District/ President Woo for the great presentation. Mr. Friedenbach concurred. Progress continues with the instream flow grant. Staff is still working on setting up a meeting with State Water Board staff to discuss our project. David Aladjem, President Woo and he will attend in person with State Water Board staff and others will participate via video.

Cannabis Grows affecting Mad River Watershed

Mr. Friedenbach attended the opening of the Bureau of Cannabis Control at 930 Sixth Street. He met Bureau Chief Lori Ajax, Assistant Chief Alex Traverso, and toured the facility.

District Fees at Ruth Lake

Last month, staff introduced the concept of adjusting District fees charged for various services/items in and around Ruth Lake. Since the cabin remodel is nearly complete, staff reviewed the fee charged for use of the cabin. Mr. Friedenbach provided background on past fee charges and proposed a new fee of \$40 per night. The proposed rate was discussed at employee meetings at Essex and Eureka and was acknowledged as reasonable. Staff also proposes the cabin be available for use by current employees or directors. This would be an employee benefit and not available to the public or former employees or directors. On motion by Director Latt, seconded by Director Hecathorn, the Board voted 4-0 to increase the rental rate to \$40 per night effective immediately for use by only current employees and directors, provided it is not needed for District business.

I. NEW BUSINESS

Joint Board Meeting with Ruth Lake CSD

The Board discussed possible meeting dates in June and July for a joint board meeting with Ruth Lake CSD. The two dates that worked for the Board were June 28 and July 19. Staff will share the information with the Ruth Lake CSD Board for their meeting on April 25th.

Prevention Plan for Quagga and Zebra Mussels at Ruth Lake

Mr. Friedenbach shared the updated Prevention Plan. He informed the Board that requirements for the Quagga grant have changed and now include a CDFW approved Prevention Plan for Quagga and Zebra mussels. Staff has been consulting with the Northern California CDFW Invasive Species Specialist in regards to updates to our plan necessary for approval. On motion by Director Hecathorn, seconded by Director Fuller, the Board voted 4-0 to approve the updates to the Prevention Plan for Quagga and Zebra Mussels at Ruth Lake.

Resolution 2019-06 Quagga Grant Application

Mr. Friedenbach stated the District will apply for another quagga grant from the Department of Boating and Waterways. One of the requirements is a resolution authorizing the application and funding agreement if the grant is awarded. Director Hecathorn read the resolution, The Board voted



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4-0 by roll call vote to approve Resolution 2019-06 for the Quagga/Zebra Infestation Prevention Grant Program Application and Funding Agreement 2018-19.

J. **REPORTS (from Staff)**

1. **Engineering**

Collector 2 Cable Car Landslide

Mr. Kaspari stated the contractor started demo of the cable car building and cleanup of the landslide. Repair work was delayed due to rain. He anticipates about two weeks to finish repairs. The District is seeking to be reimbursed from disaster funds, if a National Disaster is declared for California for the winter storms.

Collector 4 bank erosion

Mr. Kaspari shared photos of the erosion and exposed pipe and photos of the same after emergency repair was done. Additional work will be done in the summer under the LTSA.

Matthews Dam Left Abutment Landslide

Mr. Kaspari shared photos of the area after the recent storms. This is a shallow ceded landslide and the dam is not in danger. The landslide is more of a maintenance headache.

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

The District received a signed contract back from Figas Construction. CalOES has also finalized the grant by approving Phase 2. The project must be completed by September when the grant expires. That deadline is expected to be met.

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

Mr. Kaspari stated they are moving forward with the project design and have requested a grant extension.

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

No updates.

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

No updates.

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

No updates.

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

No updates.

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

Mr. Kaspari stated the grant application is due April 18. They will be ready to submit the application by the deadline.

Mad River Crossing – ASCE Project of the Year Submittal

Mr. Kaspari shared that the submitted for nomination the Humboldt Bay Municipal Water District, Mad River Crossing Pipeline Replacement. project to the ASCE North Coast Branch for



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the Project of the Year award. The banquet will be May 1st and he's not sure if the winner will be announced prior to that or not. He noted that it is up against some really good projects. He will also submit the project to the ASCE San Francisco section as well.

Lazzar Development 27th Street

Mr. Friedenbach stated the easement was drafted by legal counsel and initially, Mr. Lazzar stated it looked good. He is now thinking about selling the property or just putting one house on it. At this point, staff is waiting to see what Mr. Lazzar decides to do with the property.

2. **Financial**

Financial Report

Ms. Harris provided the March financial report and reviewed the new format. The new format is easier to understand and is all formatted in the same direction. Director Fuller reviewed the bills and stated all was tidy and in order. On motion by Director Fuller, seconded by Director Hecathorn, the Board voted 4-0 to approve the March 2019 financial statement and vendor detail report in the amount of \$566,999.39.

FY June 30, 2018 Audit Report

Ms. Harris stated the audit report is for the fiscal year ending June 30, 2018. There was no audit committee meeting as one of the members was unavailable. President Woo did meet with the auditor, Michael O'Connor yesterday to take care of required paperwork and other audit procedures. This is the third year Mr. O'Connor of R.J. Ricciardi conducted the audit for the District. Mr. O'Connor thanked the Board for opportunity to provide the audit. As noted, he met with President Woo to review the audit with her. He stated the District received an unmodified opinion which is the best opinion that can be received. He highlighted various aspects of the report and stated that in regards to fraud/internal controls, there are no recommendations for improvement. The District is doing a good job, keep it up. On motion by Director Latt, seconded by Director Hecathorn, the Board voted 4-0 to accept the audit report and to request a quote for service for the next three years from R. J. Ricciardi.

Audit Committee Alternate

Mr. Friedenbach inquired if the Board would want to consider an alternate for the Audit Committee. As noted earlier, the committee was not able to meet due to scheduling conflicts. This was the first time, in recent memory, that the committee was not able to meet. However, it seems prudent to have an alternate. The committee meets at least one to two times per year. Director Hecathorn volunteered to be an alternate since she has a background in finances. On motion by Director Latt, seconded by Director Fuller, the Board voted 4-0 to appoint Director Hecathorn as an alternate to the Audit Committee.

Letter from County Treasurer summarizing interest earned report for quarter ending December 2018

Ms. Harris shared the report from County Treasurer John Bartholomew. She noted his sense of humor as he notes that LAIF is did better at 2.4% than the County at 1.69% for the quarter ending December 2018.

3. **Operations**

Mr. Davidsen provided the March Operational Report. Two staff from Essex are cross-training at Ruth on hydro plant operations, Essex safety training included rigging safety and asbestos/silica exposure and three staff attended a weeklong Rockwell SCADA software class. The Rockwell



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attendees stated it was a very good training with lots of value. A new O&M Tech was hired and is scheduled to start work on May 1st. The Ruth Cabin is done and the contractor was very good and knowledgeable and he is pleased with the work.

Surplus of 2008 Ford Explorer Unit 1

Mr. Davidsen requested the Board surplus the 2008 Ford Explorer. It currently has 128,000 miles and has been replaced with the new vehicle in accordance with the District's CIP schedule. On motion by Director Hecathorn, seconded by Director Fuller, the Board voted 4-0 to declare the 2008 Ford Explorer-Unit 1 as surplus.

K. MANAGEMENT

Thank you card from Food for People

Mr. Friedenbach shared the thank you note from Food for People. He said he was glad they were able to use the MRE's.

NCRP Prop 84 Grant

Mr. Friedenbach stated he submitted the grant application for the Collector 2 Ranney Rehabilitation project. The NCRP received a total of thirty-six projects. He is on the technical peer review committee and they will be reviewing the projects later this week. He will recuse himself when the District project is discussed.

CSDA request for support letter for ACA1 creating new constitutional vote threshold of 55% for both general obligation bonds and special taxes related to public infrastructure

Mr. Friedenbach stated the CSDA is requesting a letter of support for ACA 1. The proposal would amend the California Constitution to the lower the vote required from two-thirds to 55% for general obligation bonds and special taxes. He inquired if the District should send a letter of support. Director Hecathorn expressed her concerns. She believes Californians are taxed enough already and is opposed. Director Latt stated he hears her concerns. He noted that if it does pass the legislature with two-thirds vote, it still needs to go before the public for vote in 2020. No motion to support was made.

Ruth Lake CSD Agenda

Mr. Friedenbach stated the April 11 meeting was rescheduled to April 25 due to lack of a quorum. He plans on attending the meeting.

Resolution 2019-05 naming Ruth Cabin

President Woo and Mr. Friedenbach acknowledged all the time and work Mr. Davidsen invested in the Ruth Cabin remodel and thanked him for the work. Director Hecathorn read Resolution 2019-05 Recognizing and Honoring the Service of Dale H. Davidsen and Dedicating the Ruth Cabin in his Honor. The Board voted 4-0 by roll call vote to approve Resolution 2019-05. President Woo presented Mr. Davidsen with a framed copy of the Resolution and sign engraved with Davidsen Cabin to be placed at the cabin. Mr. Davidsen was very appreciative and thanked the Board.

L. DIRECTOR REPORTS & DISCUSSION

1. General -comments or reports from Directors

Director Latt stated it has come to his attention that someone in Manila wants the District to endorse the non-removal of ammophila. The individual was invited to the board meeting but did not show up.



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2. ACWA – JPIA

Statement of Qualifications for J. Bruce Rupp for Executive Committee

Director Latt was glad to see the letter that was sent to the Board members of agencies in the ACWA/JPIA. He stated he was not previously aware of Director Rupp 's military service and the resume is impressive.

Letter from Mesa Water District requesting consideration of vote for Fred R. Bockmiller to Executive Committee

Director Rupp will be voting at the Spring Conference.

Letter from Scott Quady for election to California Water Insurance Fund Board of Directors-
This is a new Board and Director Rupp will be voting at the Spring Conference.

Various articles from JPIA Perspectives March/April 2019

Mr. Friedenbach stated the articles are for informational purposes. He noted the photo of Director Rupp at the Executive Committee Strategic Planning Session.

3. ACWA

March regulatory update

Mr. Friedenbach stated this is for informational purposes. There was no discussion.

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

RCEA

President Woo reported out on the RCEA meeting. She stated they are moving forward with the off-shore wind energy project. Some people are opposed and believe there is not enough space on grid for both on and off-shore wind energy. She stated there is enough space on the grid for both projects. RCEA previously had a goal of 100% clean energy by 2030. That timeline has been moved up to 2025. She also noted that some disagree on what "clean energy" is. Some feel that biomass is not clean energy.

RREDC

Director Latt reported out on the RREDC meeting. He stated Matthew Marshall of RCEA was the guest speaker and presented an update on energy projects. Director Latt stated that Mr. Marshall did a good job.

ADJOURNMENT

The meeting adjourned at 2:29 pm.

Attest:

Sheri Woo, President

Barbara Hecathorn, Assistant Secretary/Treasurer

CONSENT

DEPARTMENT OF WATER RESOURCES

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



APR 17 2019

Mr. John Friedenbach, General Manager
Humboldt Bay Municipal Water District
828 Seventh Street
Eureka, California 95502.

H.B.M.W.D. APR 22 2019

Robert W. Matthews Dam, No. 1013
Trinity County

Dear Mr. Friedenbach:

Thank you for the "R.W. Matthews Dam - 2018 Dam Safety Surveillance and Monitoring Report" transmitted to us on March 28, 2019. We collect this information in accordance with Division 3, Part 1, Chapter 4, sections 6101 and 6102.5(b), of the California Water Code to monitor ongoing conditions for dam safety. We have reviewed the report and have no comments at this time

We appreciate your cooperation. If you have any questions or need additional information, you may contact me at (916) 227-4604 or Area Engineer Lakhbir Singh at (916) 227-4603.

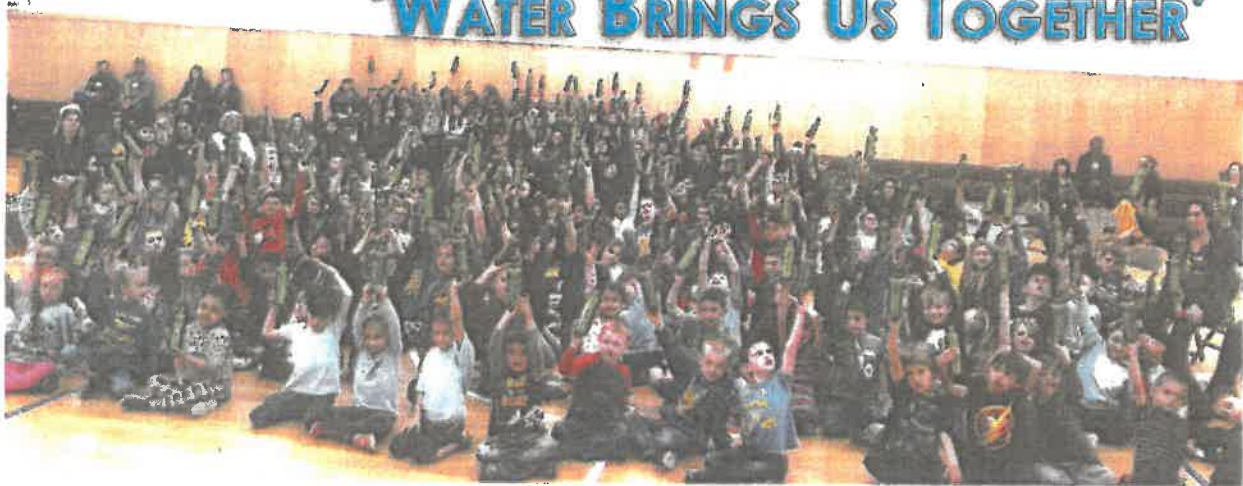
Sincerely,

A handwritten signature in black ink that reads "R. Bowlus".

Russell Bowlus, Regional Engineer
Northern Region
Field Engineering Branch
Division of Safety of Dams

cc: Mr. Frank Blackett, P.E.
Regional Engineer
Federal Energy Regulatory Commission
100 First Street, Suite 2300
San Francisco, California 94105

'WATER BRINGS US TOGETHER'



EARTH DAY Students at Blue Lake School hold up reusable metal water bottles donated by the City of Blue Lake and Humboldt Bay Municipal Water District. APRIL SOUSA | UNION

Sunny Blue Lake celebrates eco-heroes

On April 19, Blue Lake Elementary School celebrated Earth Day with a day full of activities. Starting at 9 a.m., the school held its Environmental Heroes Fair, where 18 different organizations and agencies met at the school to interact and teach the children of the school

The theme for this fair was "Water Brings Us Together."

Each student also received a water bottle to commemorate the event. The water bottles were donated by the City of Blue Lake and Humboldt Bay Municipal Water District.

At 1 p.m. the Track and Cross Country team did



a River Run, and closing ceremonies took place at Perigot Park just shortly before the end of the School Day.

Paint Night at the brewery

Blue Lake Parks and Recreation is happy to announce a paint night at the Mad River Brewery on Sunday, April 28 at 5 p.m. Registration is now taking place for this awesome event, which will cost \$30 (this does not include food and drink). If you are interested in this event, please contact myself at City Hall, (707) 668-5655, to register! All proceeds of the painting experience will be going to Blue Lake Parks and Recreation. We will be painting a spring time scene of grass and ladybugs.

Keep your eyes out as we head into the sunny days of late spring and summer. There will be so many adventures to be had here in Blue Lake.

‘Grandfather’ of natural treatment systems: HSU professor emeritus to be honored with environmental award

Bob Gearheart, instrumental in creating Arcata Marsh system, to be honored with award



Bob Gearheart stands at the Arcata Marsh. Gearheart is being honored with an environmental award on May 7 for his longtime work on natural treatment systems such as the Arcata Marsh. (Shaun Walker — The Times-Standard)

By [DAN SQUIER](mailto:dsquier@times-standard.com) | dsquier@times-standard.com | Eureka Times-Standard

PUBLISHED: April 28, 2019 at 1:03 am | UPDATED: April 29, 2019 at 1:09 pm

The city of Arcata produces more than two million gallons of sewage per day — there is nothing out of the ordinary about that statistic; it's in line with the amount of sewage generated by cities

The difference between Arcata and those other similarly sized cities is the manner in which the sewage is treated. The procedure the city currently uses to process its wastewater didn't exist 50 years ago. It was the engineering skill of two men that led to an innovative wastewater treatment system that not only handles the city's sewage but also provides a wildlife sanctuary that is one of the city's most popular attractions.

The development of the Arcata Marsh as an integral part of wastewater treatment in Arcata was the primary focus of two professors at Humboldt State University, George Allen and Robert Gearheart, who developed a process that uses what was a former salt marsh as a means to treat sewage that is then discharged into Humboldt Bay.

On May 7, Gearheart, who you can still find working at the marsh on a daily basis, will be honored by the Environmental Law Institute at its annual awards dinner in Washington, D.C.

Gearheart will receive the Institute's award for scientific research. It was two former students of his at HSU, Eileen Cashman and Brad Finney, currently professors in the

school's Environmental Resources Engineering Department program, who nominated him for the award.

"I would just say his 40-plus year career in which he has been dedicated to understanding wetlands systems in a very applied way," Cashman said when describing why she and Finney nominated Gearheart. "He's just inspiring in his commitment to sustainability and the scientific approach to understanding water systems. He brings a blend of skills — biologist, engineer, teacher — and hundreds of students have been impacted and inspired by what he's done."

The development of the marsh as a wastewater treatment plant was a result of the Clean Water Act signed into law in 1972, which made available millions of dollars of federal funds for research into clean water projects and, according to Gearheart, it put him on the road to where he is now.

"In a way, I'm a child of the Clean Water Act," said Gearheart who earned bachelor's degrees in mathematics and biology, and then got his master's and Ph.D. at Oklahoma University. "It opened up a lot of opportunities for engineers to get actively involved in water quality. I found a niche that didn't exist earlier with my background in biology and it was work that was done in Europe in the 1960s and 1970s where they found wastewater that went into a natural marsh proved to be treated effectively and I thought, 'What if I could build a system similar to the natural marsh?'"

Gearheart's work has been replicated across the globe and has been used for the development of wastewater systems in Asia, Africa and North America. It was the ground-breaking nature of his work that gained him so many admirers.

"Dr. Gearheart is a well-respected biologist, researcher, and engineer in his field. His peers in Humboldt State University's environmental resources engineering program recognized his tremendous work and nominated him for this award," said Azi Akpan, program manager of the National Wetlands Awards at ELI. "Despite his undeniable contributions and exceptional career, he was absolutely astonished and humbled when I told him he received the Science Research Award. We are very excited to have the opportunity to honor him during this special anniversary year of the National Wetlands Awards."

In addition to his professional teaching duties, Gearheart dedicated countless volunteer hours to the development of the project and it was his generosity both as a teacher and a scientist that impacted so many young minds over his career.

"Bob has been working on (full-scale) constructed wetlands for 40-plus years," wrote Finney, who was mentioned by Gearheart as someone who was closely involved in the development of the marsh. "He has volunteered well over 20,000 hours of his time to design constructed wetlands, monitor their performance, perform research investigations to better understand the complex physical and biological processes that govern the impact wetlands have on water quality, and to help educate engineers,

planners, environmental scientists, and decision makers on the multiple beneficial uses of constructed wetland. However, Bob is not one to blow his own horn, so for all of this effort, he has received little recognition from the professional community. I have been honored to be able to learn from and work with Bob for many years, and nominating him for this award was a way to see that he finally gets the recognition that he deserves.”



• Bob Gearheart is seen here in 1989 at the Arcata Marsh. Gearheart would go on to develop the marsh into a wastewater treatment system that's in operation to this day. (Humboldt State University -- Contributed)

The wastewater treatment system went online in 1985 and it was sparked by a plan to construct a traditional water treatment facility that would have served Arcata, Eureka and McKinleyville until a former Arcata City Public Works Director, Frank Klopp, who, alarmed at the growing costs associated with the traditional wastewater treatment facility, urged city leaders to break from the deal and develop a system of their own.

City officials would battle long and hard with state agencies to get the marsh project going and when it was finally approved for a pilot project in 1981 it didn't take long for Gearheart and the other scientists to be proved correct.

“The pilot project marked the beginning of Bob's efforts for the city of Arcata that continue to this day,” Finney wrote. “Bob has an educational background in both biological sciences and engineering which allowed him to see the layered benefits of incorporating constructed wetlands into a wastewater treatment system. A wetland system is relatively easy to construct and maintain, and requires far less energy input compared to more conventional wastewater treatment processes.”

The cost benefits were immediately apparent to Arcata officials and it's estimated the construction of the wetlands project saved the city about \$3 million they would have spent on the traditional plant. Those savings are still being realized today because so much of the infrastructure is natural.

“It really has broadened the horizon in terms of the role of government policies being implemented that recognize wastewater as a resource and that’s a big thing because, in many areas, it’s your most reliable water source if treated properly,” said Gearheart who mentioned projects done in Egypt, Mexico and Central America. “Connecting the dots with what we are doing in Arcata with other places promotes beneficial uses of marshes. It’s very important because it’s a local source of water and the land use can be focused on education. Before it was just pipes running into the ocean. I think the basic principle is it keeps construction and maintenance costs low. The only requirement is that it needs space.”

For Cashman, when you combine the excellent engineer with the excellent man you get someone worthy of being recognized for their excellence.

“He’s been a pioneer and really inspirational in terms of trying to understand the science and how we communicate that science to other people,” Cashman said. “He’s worked on hundreds of systems across the world and when we put together the nomination package I asked him to list all the projects he’s worked on and it was thousands of wetlands. He’s such a good guy, such a nice, generous, sincere person and he’s very humble. He was here early on when the program first started. He’s one of the reasons we are a leader in natural treatment systems. He’s really the grandfather; he’s the one who started it all.”

Dan Squier can be reached at 707-441-0528.

Arsenic in Some Bottled Water Brands at Unsafe Levels, Consumer Reports Says

Keurig Dr Pepper suspends production of its Peñafiel brand, as CR urges a full recall and tougher federal standards. What you need to know.

By Ryan Felton

Last updated: April 18, 2019



PHOTO: NIGEL COX

Natural foods grocery chain Whole Foods introduced its new brand of bottled water at a 2015 investor event, where company executives heralded the product's purity and healthfulness.

"It naturally flows out of the ground," chief operating officer A.C. Gallo said about the company's spring in Council, Idaho, according to a published transcript on its website. "We built, actually, a spring house over it so we can let the water go down to the bottling plant. It's amazingly pristine water."

Yet from late 2016 to early 2017, Starkey Water—the name of Whole Foods' brand—recalled more than 2,000 cases of water after tests by regulators showed an impermissible level of arsenic beyond the federally mandated threshold of 10 parts per billion. A year later, Whole Foods' internal testing showed results that were just under the federal limit but still at levels that pose risks if regularly consumed, according to growing research and independent experts, including Consumer Reports' scientists.

Over the past few years, as consumers have worried more about the quality of municipal tap water, bottled water has surged in popularity. It's now the nation's best-selling bottled beverage, according to the International Bottled Water Association. But a CR investigation has found that in some cases bottled water on store shelves contains more potentially harmful arsenic than tap water flowing into some homes.

“It makes no sense that consumers can purchase bottled water that is less safe than tap water,” says James Dickerson, Ph.D., chief scientific officer at Consumer Reports. “If anything, bottled water—a product for which people pay a premium, often because they assume it’s safer—should be regulated at least as strictly as tap water.”

For this report, CR tracked down and reviewed hundreds of public records and test reports from bottled water brands, and from various federal and state regulators. We found that several popular brands sell bottled water with arsenic levels at or above 3 ppb; current research suggests that amounts above that level are potentially dangerous to drink over extended periods of time. CR believes the federal limit for bottled water should be revised to 3 ppb from the current federal standard of 10 ppb.

In total, CR identified 11 brands out of more than 130 that either self-reported or, based on tests we commissioned, had detectable amounts of arsenic. Of those, six had levels of 3 ppb or higher. These brands are Starkey (owned by Whole Foods), Peñafiel (owned by Keurig Dr Pepper), Crystal Geyser Alpine Spring Water, Volvic (owned by Danone), and two regional brands, Crystal Creamery and EarthH₂O.

As part of our investigation, CR also was able to purchase two brands of imported water—Jermuk from Armenia and Peñafiel from Mexico—that are on an import alert issued by the federal government for previously having arsenic levels above the federal limit of 10 ppb. Such an alert is meant to “prevent potentially violative products from being distributed in the United States,” according to the Food and Drug Administration. Even so, CR easily purchased the two brands in retail stores in two states and on Amazon.

A spokesperson for the FDA, which regulates bottled water, wouldn’t comment directly on the availability of the products but said that the agency takes the issue of heavy metals “seriously” and that if a product on the market is deemed “adulterated,” the agency will take “appropriate action.”

Beverage giant Keurig Dr Pepper provided CR in March with Peñafiel’s bottled water quality report for 2018, which stated that the water had nondetectable amounts of arsenic. But the company said this week that it had conducted new testing, because of CR’s questions, and confirmed levels above the federal limit, at an average of 17 ppb.

Keurig Dr Pepper said Monday that it had suspended bottled water production for two weeks at its Mexico facility that makes Peñafiel for export to the U.S. It plans to improve filtration at the plant to lower arsenic levels, the company told CR. For its latest internal testing, the company said it used a different protocol and consulted the FDA. A recall isn’t planned, Peñafiel said, but CR believes one should be issued.

“An arsenic level of 17 ppb is a clear violation of the federal bottled water standard of 10 ppb,” says Jean Halloran, director of food policy initiatives at CR. “Keurig Dr Pepper should recall all Peñafiel water currently on the market that may contain these violative levels. If they do not act, the FDA should mandate a recall.”

Companies Can Remove Arsenic

Arsenic is a naturally occurring heavy metal that can cause disease and also affect child development. It can be found in natural water supplies, depending on the geology of the area. There are also water sources that don't contain the heavy metal. Companies can test for it and also use certain treatment processes to remove it from water.

“With bottled water, why should you have arsenic in the water?” says Ana Navas-Acien, M.D., Ph.D., professor of environmental health sciences at the Mailman School of Public Health at Columbia University in New York City. “There should be plenty of opportunities for treatment and remediation.”

Bottled water manufacturers promote their product as a pure, healthy alternative to sugar-loaded sodas, and the industry's sales have been on a continuous climb for years, thanks in part to skittish consumers uneasy about the quality of water from their taps after a highly publicized water quality scandal in Flint, Mich., in 2015.

To be sure, CR also found dozens of bottled water brands that reported nondetectable levels of arsenic. And drinking a single glass of water with 3 ppb of arsenic probably will not harm you, says Dickerson at CR. But regular consumption over extended periods increases the risk of cardiovascular disease, can lower IQ scores in children, and can cause certain cancers and other health problems, he says.

CR's investigation—which focused only on arsenic levels—shows that, unlike tap water, bottled water is regulated in a hodgepodge fashion. Moreover, some states have inconsistent arsenic guidelines in place for tap and bottled water, with stricter thresholds in place for tap than for bottled water. And public records on bottled water quality are also difficult to access, CR found, with some states destroying company testing reports after a year and other states not collecting them at all.

The FDA set the federal threshold for arsenic in drinking water at 10 ppb in 2006, in line with the standard for drinking water set by the Environmental Protection Agency, which regulates tap water. But New Jersey says the level for tap water should be half that. New Jersey's Department of Environmental Protection says that water with arsenic above 5 ppb shouldn't be used for “drinking, cooking, mixing baby formula, or in other consumptive ways.” However, the state's bottled water

arsenic limit is still 10 ppb, in keeping with the federal standard. New Hampshire is considering a similar standard, but also for tap water only.

CR says the limit for arsenic in bottled water should be revised from 10 ppb to 3 ppb, the same threshold CR recently proposed for apple, grape, and other juices. Recent CR testing detected the heavy metal in some juices at levels posing potential health risks.

Spot Testing 3 Brands

For this report, CR decided to commission its own independent spot tests for three brands that the FDA had previously flagged for elevated arsenic levels—the Starkey Whole Foods brand, and also Peñafiel (owned by Keurig Dr Pepper) and Jermuk.

The test results show that Whole Foods' bottled water still has levels of arsenic that approach or exceed the legal federal limit: Three samples tested this month ranged from 9.48 to 9.86 ppb of arsenic; a fourth registered 10.1 ppb, just above the federal limit of 10 ppb. The tested bottles of water were purchased in March at retail locations.

In a statement Tuesday, Whole Foods said it had recently conducted an analysis on Starkey samples from the same lot used in the tests that CR commissioned. The company said the tests "show these products are fully compliant with FDA standards for heavy metals." The company also said it tests "every production run of water before it is sold."

"We would never sell products that do not meet FDA requirements," the company's statement said.

At the same time, the Jermuk samples we tested revealed dramatically lower arsenic levels than a government test result indicated in 2009. The result of that earlier test prompted the import alert that remains in effect. CR's recent test of Jermuk water shows three tested samples averaging about 1.31 ppb, well below the federal threshold and down from the more than 450 ppb the government found in 2009. (The company bottles water at a single plant in Armenia, according to its website. Jermuk didn't respond to requests for comment.)

All three Peñafiel samples CR tested, however, found arsenic levels well above the 10 ppb limit, registering an average of 18.1 ppb.

Katie Gilroy, spokesperson for Keurig Dr Pepper, says the new internal tests of Peñafiel were conducted after CR's inquiries, revealing "somewhat elevated levels" consistent with our testing results at about 17 ppb.

“Because the health and safety of our consumers is our top priority, as soon as we received the test results, we took immediate action by stopping production at the Mexico facility in question, working with outside experts, and consulting with the FDA, which is supportive of our action plan,” Gilroy says. (An FDA spokesperson didn’t respond to a request for comment on this subject in time for publication.)

“The independent experts with whom we are working have indicated that there is no health or safety risk to consumers at the current levels, and we have begun remedying the situation by enhancing the filtration system in the plant, which we expect to take two weeks,” Gilroy said. “At that point, we will resume production.”

Gilroy says tests were conducted on products for sale in the U.S. market, “which come from one production location in Mexico.”

The International Bottled Water Association says that any product that doesn’t meet the FDA’s 10 ppb standard for arsenic “should not be allowed to be sold.”

“As with other food products, bottled water that does not meet all applicable laws and regulations is subject to FDA enforcement actions, including recalls, warning letters, and product seizures,” the IBWA says. “This helps ensure that adulterated or mislabeled products do not reach consumers.”



Peñafiel bottled water seized in December 2014 by the Food and Drug Administration. The agency found that the water had excessive arsenic levels.

PHOTO: FDA

America's Favorite Bottled Drink

The popularity of bottled water can't be overstated: Consumers nowadays have hundreds of brands to choose from—some carrying celebrity endorsements; others touting big, sometimes vague, health claims. But even as water has become the nation's most popular bottled beverage, CR's investigation also found that the regulatory regime meant to protect consumers is inadequate.

The federal government's safety inspections of water bottling facilities hit a 15-year low in 2017, according to documents CR obtained through a public records request. In 2010, the FDA conducted 371 inspections; by 2017, that number fell to 209. These inspections include verifying that companies have test results on file for their products.

But records show that some companies have been issued violations by the FDA and state agencies for lacking legally required test data. The companies were required to correct the violations by a later date, records show. The FDA doesn't conduct tests on individualized finished bottled water during these inspections, a spokesperson said, and relies on companies to produce their own results. (Imported water could be tested during routine border testing at ports of entry, however, the spokesperson said.)

That could be an unsettling reality for some consumers, especially those in cities that have turned to bottled water because of unsafe tap water, such as Flint, Mich., which continues to deal with the effects of a lead-in-water scandal that began in 2015.

"This is a huge, multibillion-dollar industry selling a product that is viewed by many consumers as safer than tap water," says Erik Olson, senior director of health and food at the Natural Resources Defense Council (NRDC), which published a four-year bottled water study in 1999. He says that "meaningful oversight of this extremely profitable business" is needed and that consumers should be able to easily get test results online.

Years after Flint's lead contamination first became known, donations of bottled water continue to flow into the city. At the same time, perhaps in response to quality concerns that Flint's crisis sparked elsewhere, sales of bottled water nationally have risen 19 percent, to \$18.5 billion in 2018, according to the IBWA.

"These companies make a mint on basically something that's a free resource," says David Carpenter, Ph.D., director of the Institute for Health and the Environment at the State University of New York at Albany. "So there's no reason that they can't find a water source that is either very, very low in arsenic, or do the treatment themselves."

Looking for Arsenic Answers

A key problem, CR found, is that the industry and the government haven't made it easy for the public to obtain information on bottled water quality.

For one thing, a public repository of bottled water quality information currently doesn't exist.

Few states regularly conduct independent tests on bottled water for contaminants, as municipalities must for tap water. Many states, however, require bottled water companies to submit the results of their own testing to sell products. But CR found that information can be hard to come by.

In California, for example, CR filed a public records request for all test reports submitted to the state by bottled water manufacturers, as required under a 2009 state law. Because the state discards these records once a company is deemed in compliance, the best it could do was to provide CR with a list of companies licensed to bottle water. The state recommended that we contact the companies for their reports.

So we did. Ultimately, using the California list and other sources, we obtained reports representing more than 130 bottled water brands across the country, either through company websites or in response to queries sent to them. We also reviewed public records and independent studies that have analyzed bottled water.

Overall, beyond our tests that revealed Peñafiel, owned by Keurig Dr Pepper, had levels of arsenic in excess of the federal standard, five companies self-reported levels at or above CR's recommended cutoff of 3 ppb. In addition to Starkey (8 ppb), that included two other national brands—Crystal Geyser (3.8 ppb for water bottled at its facility in Olancho, Calif.) and Volvic (4 ppb). Earth₂O (3 ppb), a firm based in Oregon, reported 3 ppb.

Crystal Creamery, based in California, reported in 2017 that its water contained 5 ppb of arsenic. The California Department of Health says the company's license to sell bottled water expired in June 2018. Some consumers, however, may still have the product on their shelves.

Two more brands, Aguavida, a regional brand in California, and Badoit, a mineral water owned by Danone, fell shy of CR's cutoff, reporting 2 ppb, a level researchers say is associated with health issues such as high blood pressure and circulatory problems.

Two leading national brands—Fiji and Niagara Bottling (for its spring water)—reported 1 ppb of arsenic on average in their most recently available reports. Another, Poland Spring, reported nondetectable levels below 2 ppb.

CR contacted the companies that reported detectable amounts, and of those that responded, most said that they adhered to government standards and that arsenic can be naturally occurring. Crystal Creamery and Crystal Geyser did not respond to a CR request for comment.

“Volvic Natural Spring Water is naturally filtered as it slowly trickles down through hundreds of layers of porous puzzolana sand, basalt, and lava stone,” said Alessandra Simkin, senior manager of external communications at Danone, which owns Volvic, in a statement. “As the water filters through these different volcanic layers, it absorbs natural minerals, where arsenic naturally occurs. The level in Volvic is 4 ppb, well below the FDA arsenic maximum level. Volvic is safe and in full compliance with all applicable federal, state, and industry bottled water standards.”

Austin Bouck, plant manager at EarthH₂O, said in an email, “As a responsible producer of bottled water, we continue to listen to the public health experts at the FDA and EPA to help us ensure we produce a safe, wholesome product, just as we did in 2000 when the arsenic limits were last evaluated.”

“We always encourage those agencies to make decisions that are in the best interest of public health and consumer choice, and will continue to re-evaluate our water source as new benchmarks and standards are established,” Bouck said.

Separately, independent studies have tested other brands and found arsenic: A 2011 study conducted by the Los Angeles County Agricultural Commissioner/Weights & Measures found that grocery chain Trader Joe’s bottled water had 3.48 ppb of arsenic. Trader Joe’s didn’t respond to repeated requests for comment on the study’s findings.

How Much Arsenic Is Too Much?

Arsenic—found naturally in soil, minerals, air, and plants—enters water by way of eroding rocks and minerals, urban runoff, pesticides, and municipal waste disposal. Because it’s ubiquitous, it can also get into the foods and drinks we consume. In fact, CR has recently found worrisome levels of arsenic in juices and baby foods.

For many years, the upper limit for arsenic in drinking water was set at 50 ppb. But in 2001, the EPA responded to rising concerns about the heavy metal’s health risks by lowering that level, initially

suggesting 3 ppb as a “feasible” cutoff. The agency eventually settled on 10 ppb because it “maximizes health risk reduction benefits at a cost that is justified by the benefits.”

Growing research, however, suggests that the health risks of arsenic exposure emerge at levels below 10 ppb, especially in children, says Joseph Graziano, Ph.D., a professor of environmental health sciences at Columbia University’s Mailman School of Public Health and professor of pharmacology at Columbia’s medical school. For example, a 2014 study he co-authored found that an arsenic level of 5 ppb or greater in a child’s household water supply was associated with a 5- to 6-point reduction in IQ compared with those whose exposure to arsenic levels was below 5 ppb.

Regular exposure to small amounts of arsenic can also harm adults. A 2017 study published in the journal *Environmental Research* found a relationship between exposure to arsenic levels starting around 2 ppb and prostate cancer among men in Iowa, prompting the authors to suggest that the 10 ppb arsenic limit may “not be protective for human health.”

And public health officials in New Hampshire, in explaining their pending proposal to lower the state’s cutoff for arsenic in tap water, cited research that potentially identified health problems that appear at levels below 10 ppb, including “lung, bladder and skin cancer; cardiovascular disease; adverse birth outcomes; illnesses in infants; and reduced IQ.”

In fact, the EPA itself sets its “maximum contaminant level goal” for arsenic in water—the level below which there is no known or expected risk to health—at zero.

Experts acknowledge that reaching that goal may not be practical, especially for municipal water supplies, because the cost of purification could be prohibitive.

But Navas-Acien at Columbia says that consumers often purchase bottled water because they believe it’s a safe product.

“The standard [for arsenic] needs to be stronger for bottled water, as compared to just regular old tap water,” she says.

And the FDA does have a history of enforcing stricter standards: The agency requires bottled water companies to keep lead levels below 5 ppb, but the EPA allows tap water to contain up to 15 ppb of that heavy metal.

Arsenic in Bottled Water

The bottled water brands in the chart below have arsenic levels at or above 3 parts per billion, the maximum amount Consumer Reports recommends for bottled water. That is below the Food and Drug Administration's 10 ppb limit.

The results are the most recent available from the companies themselves, or in the case of Starkey Water (owned by Whole Foods) and Peñafiel (owned by Keurig Dr Pepper), from CR's own tests.

*Keurig Dr Pepper told CR on April 15 that it had temporarily stopped production at its Mexico facility to address the problem.

Leading Bottled Waters With Lower Arsenic Levels

The bottled water brands listed below have self-reported levels of arsenic that are nondetectable or below 3 parts per billion—the maximum amount recommended by Consumer Reports—based on the most recent data available from the companies themselves (listed in alphabetical order).

Aquafina
Arrowhead
Dasani
Deer Park
Essentia
Evian
Fiji
Glaceau Smart Water
Ice Mountain
Kirkland (Costco)
Life WTR
Market Pantry (Target)
Nestlé Pure Life
Niagara
Poland Spring
Propel

Varying Results

The publicly available reports might not give a complete picture of the quality of a company's bottled water.

For one thing, water test results can vary not only from brand to brand but also from bottle to bottle, says the NRDC's Olson. "Many bottlers have multiple bottling plants," he says. "So you can have one plant that has bad source water, or you can have a plant that has a problem with its treatment or with how it's bottling the water."

Whole Foods' Starkey brand illustrates the variation that can arise. The company's 2016 water quality report listed its average arsenic level at 9 ppb, but records show that on Dec. 15 of that year, Starkey issued a recall after 11.7 ppb of arsenic was detected in a water sample by regulators in Florida. Three weeks later, a second recall was issued after 12 ppb of arsenic was detected in another sample. The Starkey brand is produced at the company's plant in Idaho.

Ronald Owens, spokesperson for the California Department of Health, says that companies with a single plant can provide the results from just one test on their bottled water report, while companies with more than one plant, like Niagara Bottling, may report a range reflecting the results from multiple locations, as long as no violations have occurred. "Average values can only be reported when all of the individual values are below a required standard," he says.

The FDA reports on the overall safety of the nation's bottled water supply in its annual Total Diet Study, but its test results may offer an incomplete picture.

The most recent results from that analysis, from 2016, show that the average amount is well below the federal 10 ppb standard, at less than 1 ppb of arsenic. But the FDA blends samples of bottled water brands together, then tests the composite sample, making it impossible to know the levels in any specific brand from that analysis.

A FDA spokesperson says the Total Diet Study is a monitoring program and "not intended to be an enforcement program."

"Bottled water is one of over 260 foods tested in the program," the spokesperson says. "The sample collections are intended to be representative of the diet. Therefore, it is appropriate to purchase foods at regions across the U.S. and to test composites rather than individual brands."

Inconsistent Oversight

The IBWA, the industry's main group, said in its statement that bottled water is "comprehensively regulated as a packaged food product by the FDA. It is required to meet the FDA's standards of identity, standards of quality, good manufacturing practices, and labeling requirements specifically for bottled water."

"As with other food products, bottled water that does not meet all applicable laws and regulations is subject to FDA enforcement actions, including recalls, warning letters, and product seizures," the IBWA said. "This helps ensure that adulterated or mislabeled products do not reach consumers."

Indeed, over the past five years, at least 22 recalls have been initiated by bottled water firms, according to FDA records obtained through a Freedom of Information Act request, including for mold, pieces of plastic ending up in the finished product, and excessive arsenic. (The agency has never mandated a bottled water recall, records show, but it didn't have mandatory recall authority until a new federal law was passed in 2011.)

Additionally, during the same period, the agency has issued at least three warning letters to bottled water firms for misbranded source water labels, E. coli contamination, and failure to conduct follow-up testing for E. coli contamination when coliforms are detected. And that follows the FDA's ongoing import alert—which began in 2009—for bottled water with high amounts of arsenic.

But CR's reporting raises additional questions about the government's oversight of bottled water products known to contain arsenic, and the industry at large.

Consider Keurig Dr Pepper's Peñafiel, which ended up on the FDA's import alert list in 2015, when a spot check by the agency found that it had arsenic levels above 10 ppb. Public records show that the water has been on the radar of New Jersey regulators going back to 2009. Since then, tests conducted by the state's health department have found Peñafiel water with arsenic levels reaching as high as 22 ppb, prompting one scientist to write in an email that the water was "well above" the state's limit for arsenic.

While the state has periodically cracked down on the company—once prompting an importer to voluntarily destroy 83 cases of Peñafiel—the results don't appear to have registered on the FDA's radar until federal inspectors independently conducted tests of its own, which also revealed excessive arsenic.

Officials for both agencies couldn't explain the seven-year gap between when New Jersey first raised a red flag and the federal government took action.

A spokesperson for the New Jersey Department of Health says the FDA was notified of its findings of excessive arsenic in Peñafiel in 2008, 2009, 2013, and 2014, adding: "I suggest you reach out to the FDA for any additional information." Asked by CR whether it was aware of the findings, an FDA spokesperson said CR would need to file a Freedom of Information Act request to get an answer.

One possible explanation for that lack of action and communication: insufficient staffing. A New Jersey Department of Health spokesperson tells CR there's only one full-time employee overseeing the state's bottled water program. (Owens, the California Department of Health spokesperson, also says there's only one full-time-equivalent employee handling that state's bottled water program.)

How to Protect Yourself

For now, it's mostly up to consumers to educate themselves, and the options for that are limited.

The chart above can help identify some brands of bottled water with arsenic levels that were undetectable or below CR's recommended cutoff of 3 ppb, based on the company's test reports. "But remember, those results are self-reported, so we cannot be certain that water actually has the amount of arsenic that is claimed," says CR's Dickerson.

If you purchase water bottled by company that isn't on the chart, you can also go to the company's website to see whether it publishes test results. Some companies include a number or email address on the label for consumer questions. Look for reports that show nondetectable levels of arsenic. But also make a point to review the entire report for other listed contaminants.

You can also limit exposure to arsenic in drinking water—tap or bottled—by running it through a reverse osmosis filter, [CR previously reported](#), but that can be pricey. We reviewed such filters in 2017 and [recommended](#) three brands, including the Culligan Aqua Cleer and Kinetico K5 Drinking Water Station. (Arsenic in tap water is a problem in certain areas of the country, such as in parts of the Southwest.)

If you'd like to get your tap water tested, you can search on the EPA's website for a [certified lab near you](#) (choose your state from the drop-down menu). Additionally, you can review the [consumer confidence report](#) for your drinking water or request a copy of it from your municipality's system.

It's also important, especially for children, to limit exposure to arsenic from other sources, including [rice](#), [fruit juices](#), and [baby foods](#). "Arsenic's health concerns are due to cumulative exposure—the more you consume, from all sources, the greater the risk," Dickerson says. "So you want to limit your exposure overall, and water is a good place to start."

Editors note: This story was updated to include an additional statement from Whole Foods saying that it tests every run of its Starkey brand bottled water.

THIS JUST IN ... Governor Newsom directs state agencies to prepare water resilience portfolio for California

April 29, 2019 [Maven](#) [Breaking News](#), [News and Features](#) [Maven's Notebook](#)



The plan will assess conditions, identify priorities, and emphasize regional approaches

This afternoon, Governor Newsom issued an Executive Order directing state agencies to collaborate on developing a water plan that identifies priorities for building a water resilient portfolio and creating a water system that will meet the water needs of California's communities, economy, and the environment into the future.

"California's water challenges are daunting, from severely depleted groundwater basins to vulnerable infrastructure to unsafe drinking water in far too many communities. Climate change magnifies the risks," said Governor Newsom in the press release. *"To meet these challenges, we need to harness the best in science, engineering and innovation to prepare for what's ahead and ensure long-term water resilience and ecosystem health. We'll need an all-of-above approach to get there."*

The new plan will build off of the Brown Administration's [California Water Action Plan](#), which was first issued in January 2014 and updated in 2016, as well as other plans and reports that

have been subsequently prepared, such as the California Water Plan, the Central Valley Flood Protection Plan, and others. The new plan is intended to identify and prioritize a broad portfolio of actions, which does mention modernizing Delta conveyance with a smaller capacity tunnel, although no additional specific details on the tunnel were included in the executive order.

“The plan should be cohesive and comprehensive and benefit people and nature,” said Wade Crowfoot, Secretary of Natural Resources. *“We want to deepen partnerships with local government, other state agencies and tribes.”*

The Executive Order directs the secretaries of the Natural Resources Agency, the California Department of Food and Agriculture, and the California Environmental Protection Agency to assess existing demands and supplies, current water quality conditions of groundwater and surface waters, projected future water needs, climate change impacts, contaminated drinking water, and existing water programs and policies. The Order also directs the agencies to assess progress on voluntary agreement negotiations as well as the current planning to modernize Delta conveyance with a ‘new single tunnel project’.

The agencies will then identify key priorities for the Newsom Administration’s water portfolio moving forward, and identify how to improve integration across agencies to implement these priorities.

Modernizing the state’s water system has become increasingly urgent as the impacts of climate change intensify. *“We have 19th century water rules and 20th century infrastructure and we’re dealing with 21st century problems,”* said Joaquin Esquivel, Chair of the State Water Resources Control Board.

“As water managers face ever increasing extreme weather future, this water portfolio approach presents a wonderful opportunity to take a proactive approach and to build on successful efforts already implemented throughout the state to move toward securing our water future,” said Grant Davis, General Manager of Sonoma Water.

The approach is to be based on a set of principles that includes strengthening partnerships with state, federal, and local agencies as well as tribal entities, water agencies, irrigation districts and other stakeholders. The plan will emphasize regional approaches, leverage the best data and technology; and integrate natural and green infrastructure. Multi-benefit

projects will be encouraged, such as floodplains that provide flood protection, create habitat and allow for groundwater recharge, noted Mr. Crowfoot.

Development of the plan will include robust outreach to stakeholders, including other state, local, and federal agencies; tribal entities; water agencies; irrigation districts; agricultural interests; environmental justice; environmental conservation organizations; business leaders; academic experts; and other stakeholders. A website has been launched at <http://resources.ca.gov/initiatives/water-resilience/> to track progress and collect public input.

The approach was hailed by environmental groups as a positive step that is badly needed. *"The Newsom administration's focus on a portfolio approach presents a tremendous opportunity to promote climate resilient water solutions that meet our needs while restoring rivers and groundwater resources,"* said Eric Wesselman, Executive Director of Friends of the River. *"I'm more optimistic than I've been in years, and Friends of the River is eager to work with the administration on this needed approach."*

Jay Ziegler, Director of External Affairs for The Nature Conservancy, said Governor Newsom's Executive Order builds upon the Brown Administration's Water Action Plan which considered how we manage water for all uses and challenged the state's residents to 'make conservation a California way of life.'

"We see Governor Newsom's action as a way to see if the strategy integrates all facets of water management," said Mr. Ziegler. *"How are we doing on water conservation goals? How are we doing in applying science to water management objectives – especially meeting environmental flow needs? How are we doing in integrating combined groundwater and surface water management in meeting SGMA objectives? How does both groundwater and surface storage fit into the strategy? How are we doing in providing clean, affordable drinking water to all? How does the tunnel strategy fit in this equation? How does the pending Voluntary Agreement/Bay-Delta Water Quality Plan Update fit in all of this? How are we doing in authorizing real "multi-benefit" projects? What kind of collaboration do we need from federal agencies – especially Reclamation and the Army Corps to achieve CA goals?"*

"The Governor's action will help pull together all these metrics to better understand and evaluate the State's water management to achieve water management goals for people and the environment," continued Mr. Ziegler. *"It is an important step forward and we look forward to evaluating the analysis, recommendations and actions called for by Gov. Newsom."*

Here is the press release and the Executive Order from the Office of the Governor:

As climate change continues to threaten the state's water infrastructure and reliability, Governor Gavin Newsom today signed an executive order directing his administration to think differently and act boldly by developing a comprehensive strategy to build a climate-resilient water system.

The order seeks to broaden California's approach on water as the state faces a range of existing challenges, including unsafe drinking water, major flood risks that threaten public safety, severely depleted groundwater aquifers, agricultural communities coping with uncertain water supplies and native fish populations threatened with extinction.

"California's water challenges are daunting, from severely depleted groundwater basins to vulnerable infrastructure to unsafe drinking water in far too many communities. Climate change magnifies the risks," said Governor Newsom. "To meet these challenges, we need to harness the best in science, engineering and innovation to prepare for what's ahead and ensure long-term water resilience and ecosystem health. We'll need an all-of-above approach to get there."

The order directs the secretaries of the California Natural Resources Agency, California Environmental Protection Agency and the California Department of Food and Agriculture to identify and assess a suite of complementary actions to ensure safe and resilient water supplies, flood protection and healthy waterways for the state's communities, economy and environment.

The order directs the state to think bigger and more strategically on water by directing the agencies to inventory and assess current water supplies and the health of waterways, future demands and challenges. The agencies will seek input over the coming weeks and months through listening sessions, information workshops and other public meetings to help inform the water resilience portfolio that will be recommended to the Governor.

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

Executive Order N-10-19

WHEREAS, water is a human right, and is central to California's strength and vitality; and

WHEREAS, we face a range of existing water challenges, including unsafe drinking water across the state, major flood risks that threaten public safety, severely depleted groundwater aquifers, agricultural communities coping with uncertain water supplies, and native fish populations threatened with extinction; and

WHEREAS, climate change is having a profound impact on water and other resources, making the climate warmer and more variable, which reduces mountain snowpack, intensifies drought and wildfires, and drives shorter, more intense wet seasons that worsen flooding; and

WHEREAS, California continues to grow, with our population projected to grow to 50 million over the next several decades and our economic activities expanding as the world's fifth largest economy; and

WHEREAS, the future prosperity of our communities and the health of our environment depend on tackling pressing current water challenges while positioning California to meet broad water needs through the 21st century; and

WHEREAS, many state programs, policies and investments are being implemented, such as the Sustainable Groundwater Management Act and new urban water efficiency standards, that can be built upon to meet these evolving challenges; and

WHEREAS, providing clean, dependable water supplies to communities, agriculture, and industry while restoring and maintaining the health of our watersheds is both necessary and possible; and

WHEREAS, achieving this goal requires a broad portfolio of collaborative strategies between government, sovereign tribes, local communities, water agencies, irrigation districts, environmental conservationists, academia, business and labor leaders, and other stakeholders.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, by virtue of the power and authority vested in me by the Constitution and the statutes of the State of California, do hereby issue this Order to become effectively immediately.

IT IS HEREBY ORDERED THAT:

1. The California Natural Resources Agency, the California Environmental Protection Agency, the California Department of Food and Agriculture, in consultation with the Department of Finance, shall together prepare a water resilience portfolio that meets the needs of California's communities, economy, and environment through the 21st century.

These agencies will reassess priorities contained within the 2016 California Water Action Plan, update projected climate change impacts to our water systems, identify key priorities for the administration's water portfolio moving forward, and identify how to improve integration across state agencies to implement these priorities.

2. These agencies shall first inventory and assess:
 - a. Existing demand for water on a statewide and regional basis and available water supply to address this demand.
 - b. Existing water quality of our aquifers, rivers, lakes and beaches.
 - c. Projected water needs in coming decades for communities, economy and environment.
 - d. Anticipated impacts of climate change to our water systems, including growing drought and flood risks, and other challenges to water supply reliability.
 - e. Work underway to complete voluntary agreements for the Sacramento and San Joaquin river systems regarding flows and habitat.
 - f. Current planning to modernize conveyance through the Bay Delta with a new single tunnel project.
 - g. Expansion of the state's drinking water program to ensure all communities have access to clean, safe and affordable drinking water.
 - h. Existing water policies, programs, and investments within state government.

3. This water resilience portfolio established by these agencies shall embody the following principles:
 - a. Prioritize multi-benefit approaches that meet multiple needs at once.
 - b. Utilize natural infrastructure such as forests and floodplains.
 - c. Embrace innovation and new technologies.
 - d. Encourage regional approaches among water users sharing watersheds.
 - e. Incorporate successful approaches from other parts of the world.
 - f. Integrate investments, policies and programs across state government.
 - g. Strengthen partnerships with local, federal and tribal governments, water agencies and irrigation districts, and other stakeholders.

4. These agencies shall conduct extensive outreach to inform this process, including to other state agencies, sovereign tribes, federal and local government, local water agencies, agricultural groups, environmental justice and environmental conservation organizations, local and statewide business leaders, academic experts and other stakeholders.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order shall be filed with the Office of the Secretary of State and that widespread publicity and notice shall be given to this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its departments, agencies, or other entities, its officers or employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 29th day of April 2019.



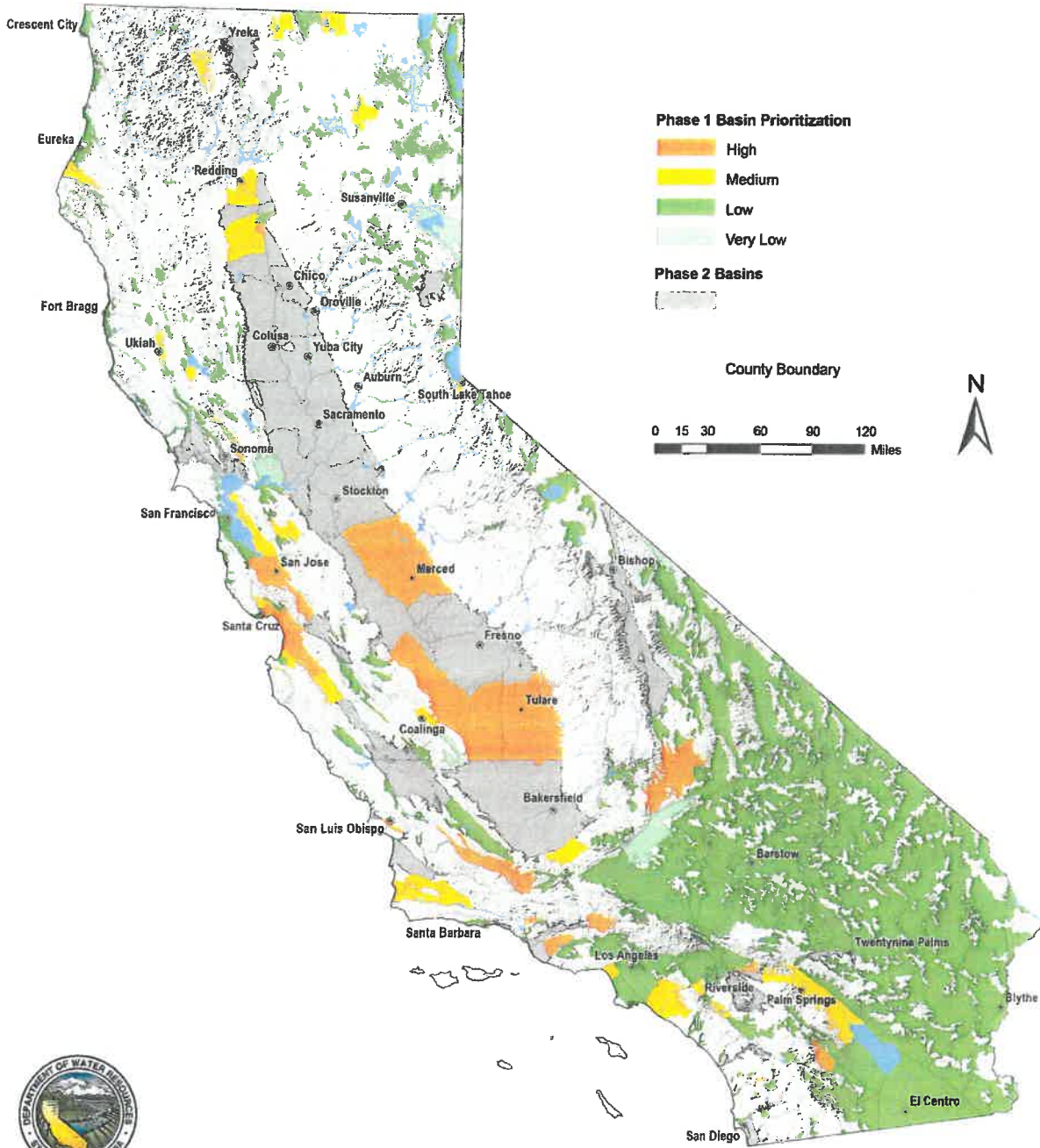
GAVIN NEWSOM
Governor of California

ATTEST:

ALEX PADILLA
Secretary of State

California Department of Water Resources

Figure A-1 Statewide Map of SGMA 2019 Basin Prioritization Results, Phase 1 Final



-DRAFT-
subject to change

Department of Water Resources, Public Affairs Office April 17, 2019

Table A-1 Statewide SGMA 2019 Basin Prioritization Results, Phase 1 Final

SGMA 2019 Basin Prioritization Phase 2 basins and their draft results will be listed in Table A-2.

Basin Number	Basin/Subbasin Name	Area (Acres)	Area (Square Miles)	Priority
1-001	Smith River Plain	40,434.5	63.2	Very Low
1-002.01	Tulelake	110,521.4	172.7	Medium
1-002.02	Lower Klamath	75,330.3	117.7	Very Low
1-003	Butte Valley	79,739.0	124.6	Medium
1-004	Shasta Valley			See Table A-2
1-005	Scott River Valley	63,831.4	99.7	Medium
1-006	Hayfork Valley	3,297.5	5.2	Very Low
1-007	Hoopa Valley	3,897.2	6.1	Very Low
1-008.01	Mad River Lowland	24,663.2	38.5	Very Low
1-008.02	Dows Prairie School Area	15,416.1	24.1	Very Low
1-009	Eureka Plain	38,795.4	60.6	Very Low
1-010	Eel River Valley	72,956.7	114.0	Medium
1-011	Covelo Round Valley	16,408.9	25.6	Very Low
1-012	Laytonville Valley	5,023.7	7.8	Very Low
1-013	Little Lake Valley	10,025.5	15.7	Very Low
1-014	Lower Klamath River Valley	7,022.1	11.0	Very Low
1-015	Happy Camp Town Area	2,773.3	4.3	Very Low
1-016	Seiad Valley	2,245.1	3.5	Very Low
1-017	Bray Town Area	8,032.4	12.6	Very Low
1-018	Red Rock Valley	9,000.7	14.1	Low
1-019	Anderson Valley	4,972.8	7.8	Very Low
1-020	Garcia River Valley	2,199.5	3.4	Very Low
1-021	Fort Bragg Terrace Area	23,897.8	37.3	Very Low
1-022	Fairchild Swamp Valley	3,277.9	5.1	Very Low
1-025	Prairie Creek Area	20,848.8	32.6	Very Low
1-026	Redwood Creek Area	2,009.4	3.1	Very Low
1-027	Big Lagoon Area	13,217.0	20.7	Very Low
1-028	Mattole River Valley	3,160.0	4.9	Very Low
1-029	Honeydew Town Area	2,369.9	3.7	Very Low
1-030	Pepperwood Town Area	6,292.0	9.8	Very Low
1-031	Weott Town Area	3,655.2	5.7	Very Low
1-032	Garberville Town Area	2,113.2	3.3	Very Low
1-033	Larabee Valley	967.2	1.5	Very Low
1-034	Dinsmores Town Area	2,277.9	3.6	Very Low
1-035	Hyampom Valley	1,354.8	2.1	Very Low
1-036	Hettenshaw Valley	847.0	1.3	Very Low
1-037	Cottoneva Creek Valley	762.1	1.2	Very Low
1-038	Lower Laytonville Valley	2,153.1	3.4	Very Low



FAMILIES PROTECTING THE VALLEY

Newsletter

Clean Dams!

Dams create hyower which is carbon-free energy, which if good...right? Not in California.
May 06, 2019

Dams create hyower which is carbon-free energy, which if good...right? Not in California. Hyower in California doesn't count toward our 100% clean energy goal by 2045. Why? Environmental groups "say it would undermine the state's landmark clean energy law by limiting the need to build solar farms and wind turbines." Say what? Apparently counting clean energy as clean energy means we don't need as many solar farms and wind turbines, so if we don't count them it will force the state to create more wind and solar forcing "utilities to buy additional solar and wind energy, raising energy costs for ratepayers in one of the poorest parts of the state."

Hydro projects traditionally produce 5-15% of the state's electricity, but "allowing utilities to include that electricity in their renewable energy tallies, climate advocates say, would reduce the need to build new solar and wind farms between now and 2030."

Josh Weimer, government affairs manager for the Turlock Irrigation District, summed it up this way, "We simply want to count the existing carbon-free resources that our customers have paid for."

In the end clean energy created by dams won't be declared clean until environmental groups say so.

Los Angeles Times

Hydropower bill would sabotage California's clean energy mandate, critics say

By SAMMY ROTH

APR 30, 2019 | 2:35 PM



The Don Pedro Reservoir in California's Central Valley. The hydroelectric power plant at the dam that impounds the lake generates carbon-free electricity for the Modesto and Turlock irrigation districts. (Phil Schermeister / Getty Images)

The Don Pedro hydropower project, just west of Yosemite National Park, has been churning out carbon-free electricity for nearly a century. As the Tuolumne River flows from the Sierra Nevada to the Central Valley, it passes through Don Pedro Dam, spinning four turbine generators.

None of the electricity is counted toward California's push for more renewable energy on its power grid. A new bill advanced by state lawmakers last week would change that — and it's being opposed by environmental groups, who say it would undermine the state's landmark clean energy law by limiting the need to build solar farms and wind turbines.

Under Senate Bill 100, which was signed last year by then-Gov. Jerry Brown, California is required to get 100% of its electricity from climate-friendly sources by 2045. The law has become a model for climate change action in other states, with lawmakers in New Mexico and Washington recently approving similar legislation.

But the details of how to get to 100% still need to be worked out. And now SB 386, which was written by state Sen. Anna Caballero (D-Salinas), is reviving an old fight that's never been fully resolved.

Central Valley lawmakers have long argued that large hydropower projects should count toward California's renewable energy goals. From their perspective, excluding existing hydropower facilities forces utilities to buy additional solar and wind energy, raising energy costs for ratepayers in one of the poorest parts of the state.

But environmentalists are loath to encourage the construction of new dams, which they see as destructive projects that drain rivers and kill fish.

Although the era of dam building in California largely ended decades ago, many climate advocates also oppose categorizing existing hydropower as renewable energy. They say the

state's renewable energy program was designed to eliminate fossil fuels and create jobs by supporting the growth of new industries — primarily solar and wind power — not to give utilities credit for facilities already built.

Changing the program now to include existing hydropower plants, they say, would seriously undermine SB 100, delaying by as much as a decade the state's push to replace gas-fired power plants with solar and wind.

Former state Senate leader Kevin de León, who wrote SB 100, called the new bill “a bad idea at a terrible time.”

“California should be focused on how to reduce car and truck pollution, the leading cause of greenhouse gases in our air, instead of trying to unravel America's most successful climate-fighting law,” he said in an interview.

Hydropower plants such as Don Pedro will ultimately count toward SB 100's target of 100% clean energy by 2045, which defines clean energy as all resources that don't contribute to climate change. But SB 100 also set an interim target of 60% renewable energy by 2030, which hews to a narrower definition that includes solar, wind and geothermal power, as well as a handful of other resources, but excludes large hydroelectric dams. It's the 60% target that worries climate advocates.

Large hydro projects have produced between 5% and 15% of the state's electricity in recent years, depending on rain and snowpack levels. Allowing utilities to include that electricity in their renewable energy tallies, climate advocates say, would reduce the need to build new solar and wind farms between now and 2030. As a result, more gas plants would continue to operate, spewing planet-warming pollution into the atmosphere.



Wind turbines in the Tehachapi-Mojave Wind Resource Area in Kern County on Jan. 8, 2019. (Brian van der Brug / Los Angeles Times)

SB 386 would single out Don Pedro Dam for special treatment, allowing the two Central Valley irrigation districts that own and operate the 203-megawatt hydropower facility to count the generation toward their renewable energy goals. But if lawmakers carve out an exemption for the Modesto and Turlock irrigation districts, the bill's critics say, other utilities will come clamoring for the same treatment for their large dams.

“If they do this for everybody, that completely guts SB 100,” said RL Miller, a Los Angeles-area climate activist and chair of the California Democratic Party's environmental caucus. “And so I think it's very, very dangerous.”

SB 386 could come to the Senate floor as soon as this Thursday, although Del Smith, a spokesman for the bill's author, said it's unlikely to get a vote so soon. The legislation was overwhelmingly approved last week by the Senate's energy and utilities committee by a vote of 9 to 1, with three lawmakers not voting.

The committee signed off after hearing from representatives of the two irrigation districts that would benefit.

James McFall, an assistant general manager with the Modesto Irrigation District, told lawmakers that the agency has spent \$85 million since 2010 on renewable energy resources that it wouldn't have needed if its share of Don Pedro counted toward the state's goals. SB 386, McFall said, would save the utility's customers — about one-third of whom live in disadvantaged communities — an estimated \$14 million over the next decade.

Josh Weimer, government affairs manager for the Turlock Irrigation District, made a similar argument. "We simply want to count the existing carbon-free resources that our customers have paid for," he said.

Together, the irrigation districts sell electricity to roughly 220,000 homes and business in several counties. They also supply irrigation water to nearly 9,000 agricultural customers across more than 200,000 acres. They've sparred with regulators and environmentalists over how much water should be left in the Stanislaus, Tuolumne and Merced rivers to support healthy fish populations.

Caballero, the state senator who introduced SB 386, is a moderate Democrat who was elevated from the Assembly to the Senate last year in a district that had been represented by Republicans for nearly a quarter-century. In last week's committee hearing, she said solar power "isn't going anywhere," and described her legislation as "a narrow bill that will bring much-needed economic relief to communities in the Central Valley."

"We're creating this obligation on the irrigation districts to buy these expensive solar and wind projects, and then to sell off the energy at a loss to their ratepayers. That's really why we need this bill now," Caballero said.

Representatives from several environmental advocacy groups said they hadn't paid close attention to the bill until last week and were surprised it made it out of committee so easily. On Monday, a coalition of more than 40 groups, including Audubon California, the Natural Resources Defense Council, Sierra Club California and the Union of Concerned Scientists, sent a letter to state Senate leader Toni Atkins (D-San Diego) laying out their concerns.

The American Lung Assn. sent a separate letter to Atkins. The group cited its most recent "state of the air" report, released last week, which ranked several California cities among the most polluted in the country and found that higher temperatures and wildfires fueled by climate change are making air quality even worse. SB 386, the group said, "would increase the risk of a heavier reliance on fossil fuels," further fouling the air.

"We are deeply concerned that the progress and leadership being shown through California's critical policies to reduce harmful pollution would be undermined by this measure, and because of the precedent it would set for additional utilities to seek similar concessions," wrote Will Barrett, director of clean air advocacy for the American Lung Assn. in California.



Los Angeles Mayor Eric Garcetti recently abandoned a plan to spend billions of dollars rebuilding three natural gas-fired power plants along the coast, including the Scattergood facility in El Segundo, shown on Feb. 11. (Marcus Yam / Los Angeles Times)

If the Turlock and Modesto irrigation districts really need financial relief, critics of SB 386 say, there's already a provision in the state's renewable energy mandate that allows publicly owned electric utilities to limit how much they spend. Matthew Freedman, an attorney with the Utility Reform Network, helped write that provision.

"The cost cap limitation is sufficient to deal with the circumstances of these irrigation districts," Freedman told the Senate energy committee. "And if this bill were to move forward and become law, you can be guaranteed that every single hydro-owning utility will have a bill before this committee next year seeking identical relief."

Asked why the Turlock district hasn't simply set a cost cap for its renewable energy purchases, spokesman Brandon McMillan said in an email that there has never been "any clear guidance or regulatory assurances that a cost cap mechanism would be recognized" by state officials. Invoking the cost cap provision, he said, could invite a "long, potentially contentious legal/regulatory process that provides no certainty."

Other than the Turlock and Modesto districts, the one supporter of SB 386 identified in the energy committee staff's analysis of the bill is the California Municipal Utilities Assn. Barry Moline, the group's executive director, said the debate over SB 386 should not become a debate about the merits of hydropower.

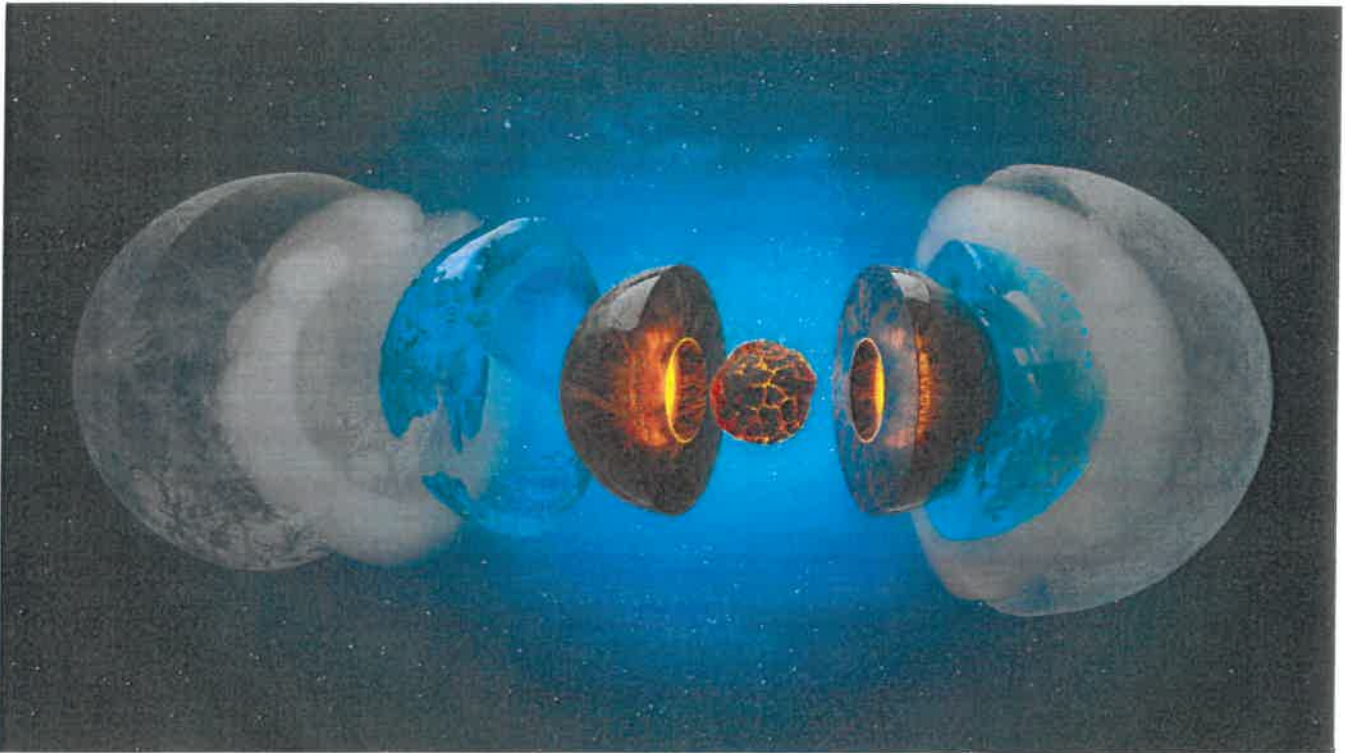
Turlock and Modesto are "standing up for their customers that want moderate costs," Moline said. "The Central Valley has higher electric bills than the coast, or almost everywhere else. And that's a significant problem that policymakers have just ignored."

Black, Hot Ice May Be Nature's Most Common Form of Water

By [Joshua Sokol](#)

May 8, 2019

A new experiment confirms the existence of “superionic ice,” a bizarre form of water that might comprise the bulk of giant icy planets throughout the universe.



The discovery of superionic ice potentially solves the puzzle of what giant icy planets like Uranus and Neptune are made of. They're now thought to have gaseous, mixed-chemical outer shells, a liquid layer of ionized water below that, a solid layer of superionic ice comprising the bulk of their interiors, and rocky centers.

[@iammoteh](#) for Quanta Magazine

Recently at the Laboratory for Laser Energetics in Brighton, New York, one of the world's most powerful lasers blasted a droplet of water, creating a shock wave that raised the water's pressure to millions of atmospheres and its temperature to thousands of degrees. X-rays that beamed through the droplet in the same fraction of a second offered humanity's first glimpse of water under those extreme conditions.

The X-rays revealed that the water inside the shock wave didn't become a superheated liquid or gas. Paradoxically — but just as physicists squinting at screens in an adjacent room had expected — the atoms froze solid, forming crystalline ice.

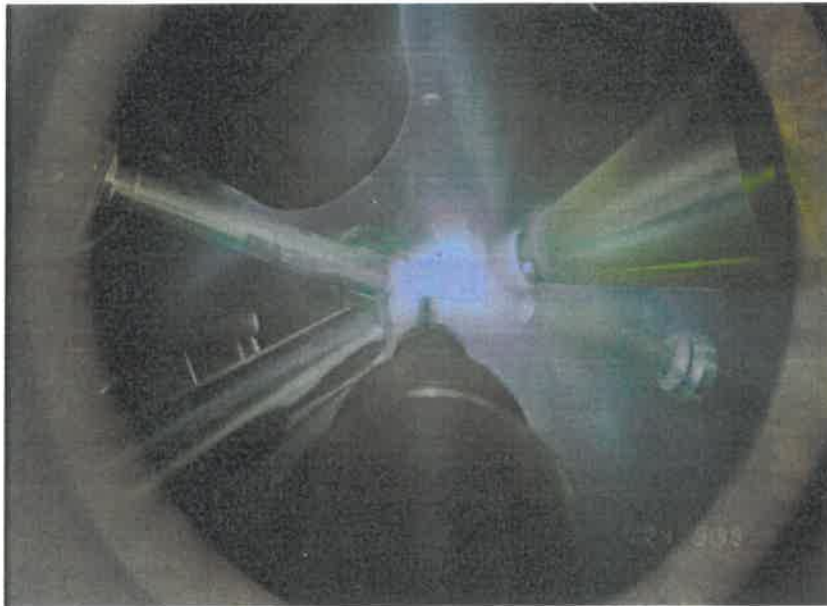
“You hear the shot,” said [Marius Millot](#) of Lawrence Livermore National Laboratory in California, and “right away you see that something interesting was happening.” Millot co-led the experiment with [Federica Coppari](#), also of Lawrence Livermore.

The findings, [published today in *Nature*](#), confirm the existence of “superionic ice,” a new phase of water with bizarre properties. Unlike the familiar ice found in your freezer or at the north pole, superionic ice is black and hot. A cube of it would weigh four times as much as a normal one. It was first theoretically predicted more than 30 years ago, and although it has never been seen until now, scientists think it might be among the most abundant forms of water in the universe.

Across the solar system, at least, more water probably exists as superionic ice — filling the interiors of Uranus and Neptune — than in any other phase, including the liquid form sloshing in oceans on Earth, Europa and Enceladus. The discovery of superionic ice potentially solves decades-old puzzles about the composition of these “ice giant” worlds.

Including the hexagonal arrangement of water molecules found in common ice, known as “ice I_h ,” scientists had already discovered a bewildering 18 architectures of ice crystal. After ice I, which comes in two forms, I_h and I_c , the rest are numbered II through XVII in order of their discovery. (Yes, there is an Ice IX, but it exists only under contrived conditions, unlike the fictional doomsday substance in Kurt Vonnegut’s novel *Cat’s Cradle*.)

Superionic ice can now claim the mantle of Ice XVIII. It’s a new crystal, but with a twist. All the previously known water ices are made of intact water molecules, each with one oxygen atom linked to two hydrogens. But superionic ice, the new measurements confirm, isn’t like that. It exists in a sort of surrealist limbo, part solid, part liquid. Individual water molecules break apart. The oxygen atoms form a cubic lattice, but the hydrogen atoms spill free, flowing like a liquid through the rigid cage of oxygens.



A time-integrated photograph of the X-ray diffraction experiment at the University of Rochester’s Laboratory for Laser Energetics. Giant lasers focus on a water sample to compress it into the superionic phase. Additional laser beams generate an X-ray flash off an iron foil, allowing the researchers to take a snapshot of the compressed water layer.

Millot, Coppari, Kowaluk (LLNL)

Experts say the discovery of superionic ice vindicates computer predictions, which could help material physicists craft future substances with bespoke properties. And finding the ice required ultrafast measurements and fine control of temperature and pressure, advancing experimental techniques. “All of this would not have been possible, say, five years ago,” said [Christoph Salzmann](#) at University College London, who discovered ices XIII, XIV and XV. “It will have a huge impact, for sure.”

Depending on whom you ask, superionic ice is either another addition to water’s already cluttered array of avatars or something even stranger. Because its water molecules break apart, said the physicist [Livia Bove](#) of France’s National Center for Scientific

Research and Pierre and Marie Curie University, it's not quite a new phase of water. "It's really a new state of matter," she said, "which is rather spectacular."

Puzzles Put on Ice

Physicists have been after superionic ice for years — ever since a primitive computer simulation led by [Pierfranco Demontis](#) in 1988 [predicted](#) water would take on this strange, almost metal-like form if you pushed it beyond the map of known ice phases.

Under extreme pressure and heat, the simulations suggested, water molecules break. With the oxygen atoms locked in a cubic lattice, "the hydrogens now start to jump from one position in the crystal to another, and jump again, and jump again," said Millot. The jumps between lattice sites are so fast that the hydrogen atoms — which are ionized, making them essentially positively charged protons — appear to move like a liquid.

This suggested superionic ice would conduct electricity, like a metal, with the hydrogens playing the usual role of electrons. Having these loose hydrogen atoms gushing around would also boost the ice's disorder, or entropy. In turn, that increase in entropy would make this ice much more stable than other kinds of ice crystals, causing its melting point to soar upward.

But all this was easy to imagine and hard to trust. The first models used simplified physics, hand-waving their way through the quantum nature of real molecules. Later simulations folded in more quantum effects but still sidestepped the actual equations required to describe multiple quantum bodies interacting, which are too computationally difficult to solve. Instead, they relied on approximations, raising the possibility that the whole scenario could be just a mirage in a simulation. Experiments, meanwhile, couldn't make the requisite pressures without also generating enough heat to melt even this hardy substance.

As the problem simmered, though, planetary scientists developed their own sneaking suspicions that water might have a superionic ice phase. Right around the time when the phase was first predicted, the probe Voyager 2 had sailed into the outer solar system, uncovering something strange about the magnetic fields of the ice giants Uranus and Neptune.

The fields around the solar system's other planets seem to be made up of strongly defined north and south poles, without much other structure. It's almost as if they have just bar magnets in their centers, aligned with their rotation axes. Planetary scientists chalk this up to "dynamos": interior regions where conductive fluids rise and swirl as the planet rotates, sprouting massive magnetic fields.

By contrast, the magnetic fields emanating from Uranus and Neptune looked lumpier and more complex, with more than two poles. They also don't align as closely to their planets' rotation. One way to produce this would be to somehow confine the conducting fluid responsible for the dynamo into just a thin outer shell of the planet, instead of letting it reach down into the core.

But the idea that these planets might have solid cores, which are incapable of generating dynamos, didn't seem realistic. If you drilled into these ice giants, you would expect to first encounter a layer of ionic water, which would flow, conduct currents and participate in a dynamo. Naively, it seems like even deeper material, at even hotter temperatures, would also be a fluid. "I used to always make jokes that there's no way the interiors of Uranus and Neptune are actually solid," said [Sabine Stanley](#) at Johns Hopkins University. "But now it turns out they might actually be."

Ice on Blast

Now, finally, Coppari, Millot and their team have brought the puzzle pieces together.

In [an earlier experiment](#), published last February, the physicists built indirect evidence for superionic ice. They squeezed a droplet of room-temperature water between the pointy ends of two cut diamonds. By the time the pressure raised to about a gigapascal, roughly 10 times that at the bottom of the Marianas Trench, the water had transformed into a tetragonal crystal called ice VI. By about 2 gigapascals, it had switched into ice VII, a denser, cubic form transparent to the naked eye that scientists recently discovered also exists in tiny pockets inside natural diamonds.



Federica Coppari, a physicist at Lawrence Livermore National Laboratory, with an x-ray diffraction image plate that she and her colleagues used to discover ice XVIII, also known as superionic ice.

Courtesy of Marius Millot

Then, using the OMEGA laser at the Laboratory for Laser Energetics, Millot and colleagues targeted the ice VII, still between diamond anvils. As the laser hit the surface of the diamond, it vaporized material upward, effectively rocketing the diamond away in the opposite direction and sending a shock wave through the ice. Millot's team found their super-pressurized ice melted at around 4,700 degrees Celsius, about as expected for superionic ice, and that it did conduct electricity thanks to the movement of charged protons.

With those predictions about superionic ice's bulk properties settled, the new study led by Coppari and Millot took the next step of confirming its structure. "If you really want to prove that something is crystalline, then you need X-ray diffraction," Salzmann said.

Their new experiment skipped ices VI and VII altogether. Instead, the team simply smashed water with laser blasts between diamond anvils. Billionths of a second later, as shock waves rippled through and the water began crystallizing into nanometer-size ice cubes, the scientists used 16 more laser beams to vaporize a thin sliver of iron next to the sample. The resulting hot plasma flooded the crystallizing water with X-rays, which then diffracted from the ice crystals, allowing the team to discern their structure.

Atoms in the water had rearranged into the long-predicted but never-before-seen architecture, Ice XVIII: a cubic lattice with oxygen atoms at every corner and the center of each face. "It's quite a breakthrough," Coppari said.

"The fact that the existence of this phase is not an artifact of quantum molecular dynamic simulations, but is real — that's very comforting," Bove said.

And this kind of successful cross-check behind simulations and real superionic ice suggests the ultimate "dream" of material physics researchers might be soon within reach. "You tell me what properties you want in a material, and we'll go to the computer and figure out theoretically what material and what kind of crystal structure you would need," said [Raymond Jeanloz](#), a member of the discovery team based at University of California, Berkeley. "The community at large is getting close."

The new analyses also hint that although superionic ice does conduct some electricity, it's a mushy solid. It would flow over time, but not truly churn. Inside Uranus and Neptune, then, fluid layers might stop about 8,000 kilometers down into the planet,

where an enormous mantle of sluggish, superionic ice like Millot's team produced begins. That would limit most dynamo action to shallower depths, accounting for the planets' unusual fields.

Other planets and moons in the solar system likely don't host the right interior sweet spots of temperature and pressure to allow for superionic ice. But many ice giant-sized exoplanets might, suggesting the substance could be common inside icy worlds throughout the galaxy.

Of course, though, no real planet contains just water. The ice giants in our solar system also mix in chemical species like methane and ammonia. The extent to which superionic behavior actually occurs in nature is "going to depend on whether these phases still exist when we mix water with other materials," Stanley said. So far, that isn't clear, although other researchers [have argued](#) superionic ammonia should also exist.

Aside from extending their research to other materials, the team also hopes to keep zeroing in on the strange, almost paradoxical duality of their superionic crystals. Just capturing the lattice of oxygen atoms "is clearly the most challenging experiment I have ever done," said Millot. They haven't yet seen the ghostly, interstitial flow of protons through the lattice. "Technologically, we are not there yet," Coppari said, "but the field is growing very fast."

CORRESPONDENCE



HUMBOLDT BAY MUNICIPAL WATER DISTRICT

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JOHN FRIEDENBACH

April 11, 2019

Mr. John Ford

Humboldt County Planning & Building Director

Via email: jford@co.humboldt.ca.us

Re: General Plan Update - Zoning Implementation Coastal Dependent Land Use Changes

Dear John,

I am writing to follow up my comments at the public forum held on February 26, 2019 regarding the zoning implementation, Coastal Dependent Land Use Changes on the Samoa Peninsula. Specifically, our District would like to provide clarification to the Humboldt County Planning Department regarding our water delivery infrastructure on the Samoa Peninsula and its capacity. As you know, Humboldt Bay Municipal Water District was formed in the 1950's primarily to supply industrial water to two separate pulp mills on the peninsula. This water is untreated, non-potable surface water pumped from our facilities at Essex and transported to the peninsula via one 42-inch pipeline which terminates at the former Simpson Pulp Mill property, now currently owned by Security National Properties. This pipeline also provides industrial water to the former LP Pulp Mill site which is currently owned by the Humboldt Bay Harbor District. At its peak production, the industrial system supplied 65 MGD (million gallons per day) of surface water to the pulp mills.

During the 1970's a domestic (potable) waterline from our regional system was extended through the Arcata Bottoms down the Samoa Peninsula past Fairhaven and then traversed back to Eureka under Humboldt Bay. This line re-surfaces in Eureka at Truesdale Avenue and supplies Humboldt Community Services District. Along its path, this domestic line, which ranges in size from 15-inches up to 27-inches, services Manila Community Services District, the towns of Samoa and Fairhaven, the DG Fairhaven Power plant, and the former LP Pulp Mill site and dock facility, and approximately 100 residential and commercial businesses on the peninsula all the way to the Coast Guard complex.

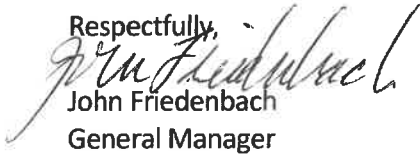
The concern I raised at the public forum was the clarification of our two autonomous water delivery systems and when contemplating zoning and future development that potential limitations on water supply should be factored into discussions for potential projects. That said, for our industrial system, I do not foresee possible limitations on capacity for delivery under that system. The current projects under consideration, Nordic Aquaculture at 3 MDG, and Enviva at less than 1 MGD, are well within the capacity of the industrial system. The final determination for which source water these projects will ultimately utilize has not been made as of the date of this letter.

However, for the domestic (potable) system, we are approaching delivery capacity on the peninsula. This is primarily due to the restricted 15-inch pipeline size for a portion of the domestic transmission line. We do have in our Capital Improvement Plan – year '25/'26- to replace this 3.75 miles of pipeline. The projected cost estimate is \$7M. This level of funding exceeds our current budget capacity and our District will be seeking external funding sources. We have modeled the capacity of the domestic water delivery system on the peninsula. And although we are not currently at maximum capacity, we are within the range where we review our ability to provide adequate water supply, including appropriate fire protection flows, on a case by case basis when any new commercial ventures express interest in development on the peninsula.

Consequently, we respectfully suggest that the Humboldt County Planning & Building Department take into consideration infrastructure conditions and/or restrictions when modifying or implementing zoning and development on the Samoa Peninsula.

If you have any questions, please do not hesitate to contact us.

Respectfully,

A handwritten signature in cursive script, appearing to read "John Friedenbach".

John Friedenbach
General Manager

Cc: Michael Richardson, Humboldt County Planning
Lisa Shikany, Humboldt County Planning
Larry Oetker, Humboldt Bay Harbor District

John Friedenbach

From: John Friedenbach <friedenbach@hbmwd.com>
Sent: Thursday, April 11, 2019 5:02 PM
To: 'Ford, John'
Cc: 'Ishikany@co.humboldt.ca.us'; 'Richardson, Michael'; Larry Oetker (loetker@humboldtbay.org); Dale Davidsen (supt@hbmwd.com); Pat Kaspari
Subject: HBMWD Comments on Zoning Changes on Samoa Peninsula
Attachments: hbmwd re coastal zoning change.pdf

Hi John,

Please include the attached letter in the Public Comments from the public forum on the zoning changes around Humboldt Bay, specifically on the Samoa Peninsula.

If you have any questions, please do not hesitate to contact me.

Thank you,

John Friedenbach
General Manager
Humboldt Bay Municipal Water District
www.hbmwd.com
707-443-5018 work
707-362-7509 cell



Humboldt Coastal Resilience Project

(Formally Dunes Climate Ready Project)

Quarterly Update: January-March, 2019



We are excited to announce that the Humboldt Coastal Resilience Project (formally Dunes Climate Ready Project) has been continued for an additional 3 years through grants from the Ocean Protection Council and the California State Coastal Conservancy.

This Quarterly Update covers the beginning of year 4 in this 6-year study which will improve understanding of sediment movement along the entire Eureka littoral cell, a 32-mile stretch of coastline composed of barrier dune systems. The study will identify potential vulnerabilities to climate change in order to develop decision support tools and adaptation measures for future sea level rise and extreme weather events. For previous Quarterly Updates, visit the [Friends of the Dunes website](#).

A combined total of \$430,750 was awarded to the Friends of the Dunes, who are the fiscal receiver and will oversee the outreach component of the grant. Funding will cover the following tasks: 1) Continuation of littoral cell cross-shore transects for an additional 2 years, resulting in a total of 5 years of data, 2) Continuation of monitoring of the Lanphere and Eel River adaptation sites, 3) Implementation of a second replication of the Lanphere adaptation site methodology in a new location, 4) Revise and update the Eureka littoral cell fluvial sediment budget, 5) Complete a vulnerability assessment for the study site, 6) Model responses of the beach-dune barrier complexes to sea level rise and extreme event scenarios, 7) Convene a stakeholder involvement group, and 8) Continue outreach activities. Following is an update of activities in the first quarter of 2019.

Littoral Cell Shoreline Monitoring

The winter 2019 survey was carried out in January and February. Extensive scarping (erosion resulting in a steep drop-off) was observed all along the littoral cell from a high water storm event in January. A summary of results to date will be distributed to collaborators and landowners after the summer survey.

Lanphere Adaptation Site

Arizona State University student Zach Hilgendorf, under the direction of Dr. Ian Walker, has completed data processing for the adaptation site terrestrial LiDAR scans from May 2017 through October 2018. Previous scans were processed by former graduate student Alana Rader. Zach is currently revising earlier data to make it

compatible with the new scans so that change analysis can be completed from the start of the project through October 2018. Change maps from May 2017 to October 2017 are shown in Figure 1. Table 1 shows net change by time interval and foredune position for this same period. During this period, the study site overall showed net deposition during all intervals.

Photopoints showing pre-treatment (summer 2015) and June 2018 are included below as Figures 2 & 3.

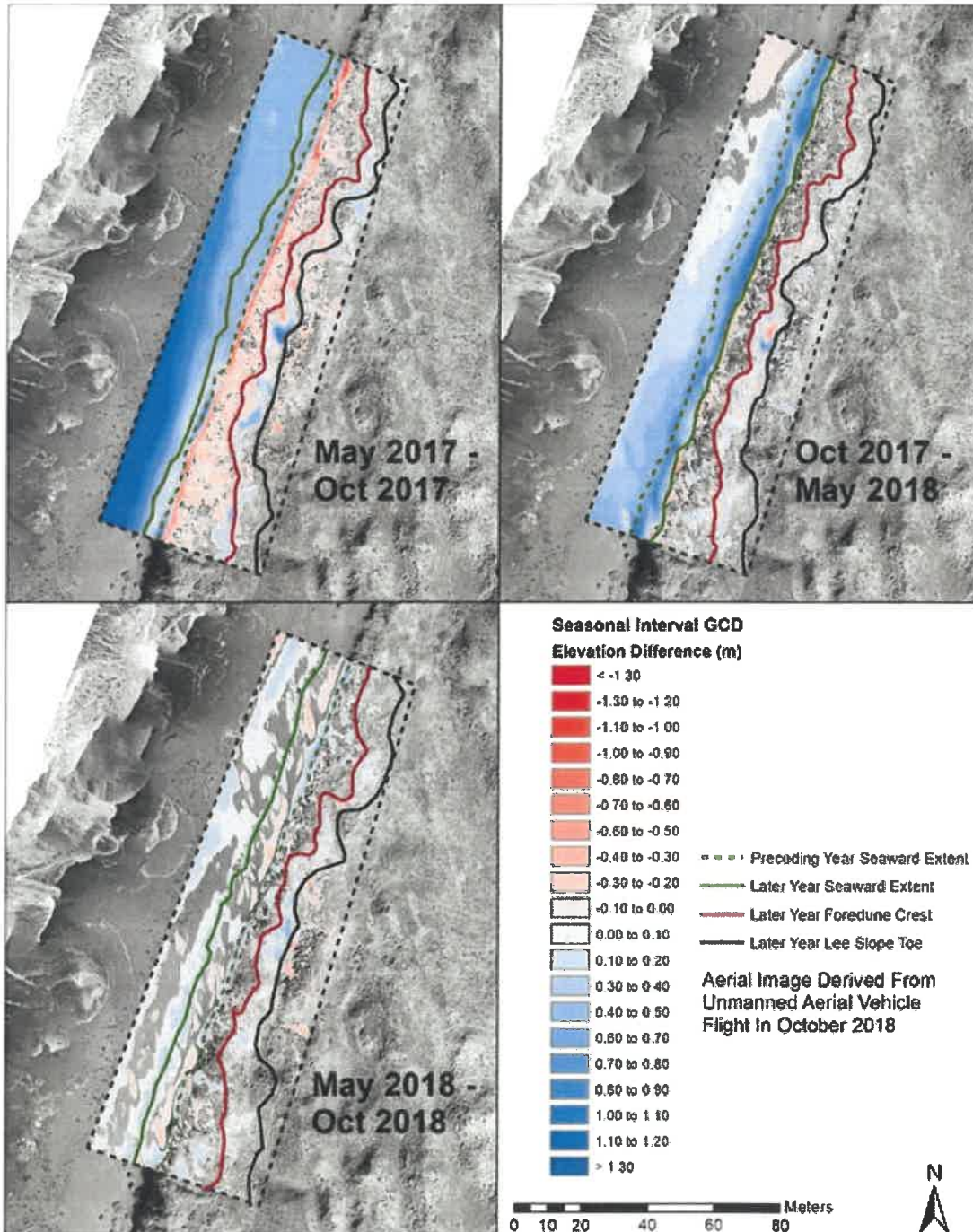


Figure 1. Erosion (red) and deposition (blue) in the Lanphere Adaptation Site from May 2017 through October 2018 (Zach Hilgendorf).

Significant Volume Change Normalized By Net Area (m ³ m ⁻²)				
Zone	May 2017 - Oct 2018	May 2017 - Oct 2017	Oct 2017 - May 2018	May 2018 - Oct 2018
Total	+0.68	+0.34	+0.23	+0.06
Beach	+1.01	+0.66	+0.24	+0.06
Foredune Stoss	+0.08	-0.06	+0.33	+0.08
Foredune Lee	+0.12	+0.06	+0.05	+0.06

Table 1. Significant changes in foredune volume in the Lanphere Adaptation site from May 2017 through October 2018 (Zach Hilgendorf).



Figure 2. Photopoint at foredune crest in Elymus treatment at Lanphere Adaptation Site showing changes from pre-treatment in summer 2015 through summer 2018. Planting occurred in December 2016.



Figure 3. Photopoint at foredune crest in dune mat treatment at Lanphere Adaptation Site showing changes from pre-treatment in Summer 2015 through summer 2018. Planting occurred in January 2017.

Eel River Adaptation Site

The California State Coastal Conservancy funded an augmentation of the Climate Ready grant in 2018 to rebuild the foredune at a breach site on the Eel River Estuary Preserve with a goal of improving resilience to storm events. The new foredune was completed in 2018 and Arizona State University used a drone platform to create a Digital Elevation Model and imagery of the site. The foredune was not scarped during the winter 2019 high water event. Topographic profiles showing the site pre-project and in winter 2019 are shown in Figure 4, and a photograph of the foredune is shown in Figure 5.

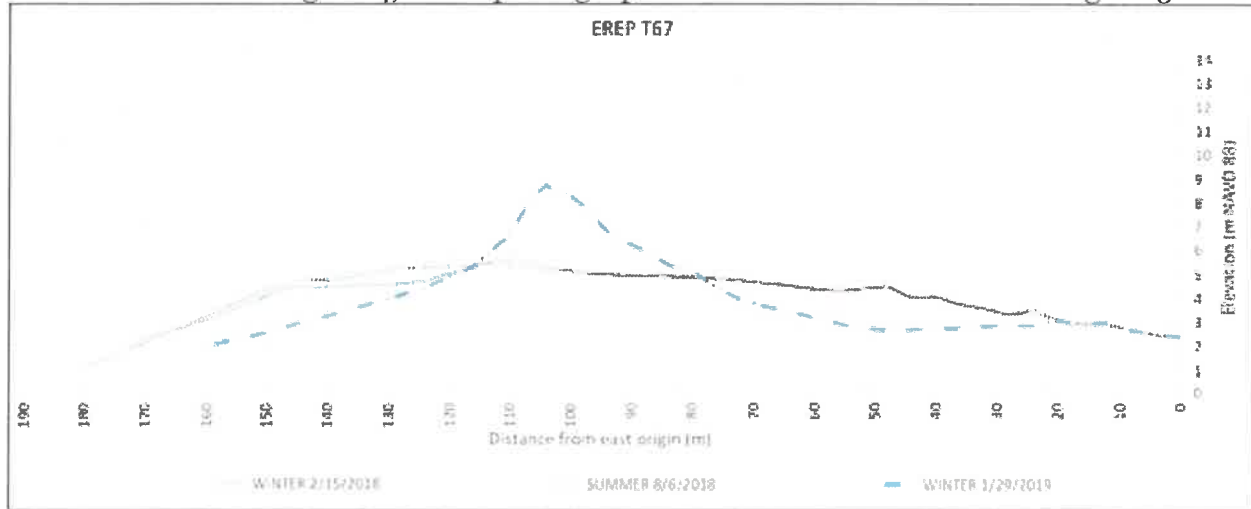


Figure 4. Eel River Adaptation site showing construction of foredune.



Figure 5. View of the reconstructed foredune at the Eel River adaptation site.



For additional background information, please visit the following websites:

[Humboldt Bay National Wildlife Refuge](#)
[California State Coastal Conservancy](#)
[Friends of the Dunes](#)

John Friedenbach

From: kgledhill@westcoastwatershed.com
Sent: Monday, April 29, 2019 2:48 PM
To: Katherine Gledhill
Subject: NCRP 2019 Proposition 1 IRWM Priority Projects

Hello All,
 The North Coast Resource Partnership (NCRP) is pleased to announce that on April 26, the Policy Review Panel (PRP) unanimously selected the following suite of Priority Projects for inclusion in the regional NCRP 2019 Proposition 1 IRWM Grant to be submitted to the Department of Water Resources in the summer of 2019. All projects submitted to the NCRP were thoroughly reviewed for technical merit and fit by the Technical Peer Review Committee (TPRC) over the past 6 weeks to advise the PRP in their decision, using the [NCRP 2019 Project Review and Selection Process Guidelines](#) and criteria established by the PRP. The PRP determined that though all 36 project proposals received in March are important implementation projects for the region, the following 20 projects represent the most critical and well-rounded suite of projects for the North Coast in 2019.

During the April 26th meeting, the PRP expressed deep gratitude to the TPRC for the quality of their review and dedication to identifying the priority projects for the North Coast region. They also voiced their appreciation to all the project proponents who submitted projects for NCRP Proposition 1 IRWM Round 1 funding and hope that project sponsors not funded this round, will consider resubmitting their proposals to the NCRP for Round 2 funding, expected to roll out in 2020.

Priority Project sponsors will be contacted in the next couple of days regarding next steps for the regional application. For more information, please see the [NCRP 2019 Proposition 1 Round 1 IRWM Project Solicitation](#) webpage.

NCRP 2019 PROPOSITION 1 IRWM ROUND 1 PRIORITY PROJECTS	FUNDING AMOUNT
Blue Lake Rancheria, Water Storage Project	\$382,085
Briceland Community Services District, Water Supply Enhancement Project	\$1,076,625
City of Ferndale, California Street Sewer Replacement	\$326,750
City of Willits, Improving Willits Water Supply Reliability and Drought Resiliency with Groundwater and Conjunctive Use	\$551,156
County Service Area No. 1, Onsite Emergency Power Supply for Sanitary Sewer Lift Stations	\$807,641
Covelo Community Services District, Collection System and Wastewater Treatment Plant Improvements	\$750,000
Eel River Watershed Improvement Group, Kenny Creek Instream Habitat Enhancement Project	\$176,077
Fieldbrook Glendale Community Services District, Water Tank Seismic Retrofit Project	\$314,744
Gold Ridge Resource Conservation District, Rainwater Catchment Rebate and Streamflow Enhancement Pilot Project	\$420,324
Humboldt Bay Municipal Water District, Ranney Collector 2 Rehabilitation Project	\$600,000
Lewiston Community Services District, Water Distribution System Replacement Project	\$1,073,273
Mattole Restoration Council, Carbon Sequest Lower Mattole River and Estuary Enhancement Project Phase II	\$656,165
Newell County Water District, Water System Improvements Project	\$461,607
Pacific Reefs Water District, Water Tank Replacement Project	\$386,274

Sanctuary Forest Inc., Drought and Emergency Water Project	\$558,501
Scott River Watershed Council, Scott River Headwaters Forest Health, Fire Safety, and Water Quality Improvement Project	\$632,370
Smith River Community Services District, Water System Emergency Generator Project	\$322,445
Watershed Research and Training Center, South Fork Trinity River – Spring Run Chinook Salmon Restoration Project – Phase II	\$832,495
Weaverville Sanitary District, Sewer Improvements Project	\$691,000
Yurok Tribe , Upgrading Critical Infrastructure to Support Resource Recovery in the Blue Creek Sanctuary	\$937,268
Total Amount	\$11,956,800

Contingency project: [City of Trinidad, Trinidad-Westhaven Community Water Reliability, Security and Enhancement Project](#) 831,389

My best,
Katherine



Katherine Gledhill
 WEST COAST WATERSHED
 PO Box 262
 Healdsburg, CA 95448-0262
 phone (direct): 707.795.1235
 cell phone: 707.583.6737
kgledhill@westcoastwatershed.com
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HUMBOLDT BAY MUNICIPAL WATER DISTRICT

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JOHN FRIEDENBACH

May 3, 2019

Caitlin Castellano, Planner
Humboldt County Planning Department
3015 H Street
Eureka CA 95501

RE: Applicant: Michael Brosgart & Arielle Brosgart; APN: 516-111-064

Dear Ms. Caitlin Castellano,

I am writing on behalf of the Humboldt Bay Municipal Water District in regards to the above referenced application. Our District respectfully submits the following information for consideration in regards to the above referenced project.

Our District is opposed to industrial development with processes containing hydrocarbon based solvents immediately upstream and in close proximity to our source water intake infrastructure located in and along the Mad River for obvious health and safety reasons. Expanded heavy industrial hydrocarbon-based operations that have the potential to adversely affect the domestic drinking water supply for nearly two thirds of the population of Humboldt County should be denied or required to complete an extended CEQA process. It is questionable whether such a project qualifies for a CEQA Mitigated Negative Declaration.

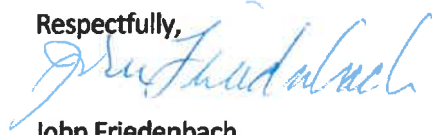
Our interest generally in this area involves the health and safety needs to protect and preserve the high-quality water source that is the Mad River and its underlying aquifers.

For the environmental review of this project, a CEQA Mitigated Negative Declaration does not address the following environmental impacts: 1) possible environmental impact to our public drinking water system for 88,000 residents of Humboldt County if a hazardous material release were to occur from the parcel from the manufacturing facility utilizing hydrocarbon based solvents activities; 2) consideration of the environmental impacts resulting from transporting hazardous materials to the site and hazardous waste from the site; 3) possible surface water impacts from surface water drainage off the parcel in such close proximity to the drinking water source for two thirds of the county's population.

We believe the project does not qualify for the Mitigated Negative Declaration under CEQA based on the above stated issues.

Thank you for your consideration of our submittal.

Respectfully,

A handwritten signature in blue ink, appearing to read "John Friedenbach". The signature is written in a cursive style with a large initial "J".

John Friedenbach
General Manager

Cc: Leslie Walker, esq.



May 3, 2019

Mr. John Ford, Director and
Planning Commissioners
Humboldt County Planning and Building
3015 H Street
Eureka, CA 95501

Director Ford and Commissioners,

On behalf of Humboldt Baykeeper's board, staff, and members, I submit these comments on the Glendale Cannabis Facility's Initial Study and Mitigated Negative Declaration, Conditional Use Permits, and Special Permits for APN 516-111-064, located at 1691 Glendale Drive in unincorporated Humboldt County near Blue Lake (Case Nos. CUP 16-1096, CUP 16-1127, SP 16-868, SP 16-870, SP 16-871, and SP 16-872; App Nos. 13312, 13319, 13328, 13339, 13346, and 13360).

Humboldt Baykeeper works to safeguard our coastal resources for the health, enjoyment, and economic strength of the Humboldt Bay community, and is a member of the California Coastkeeper Alliance and the international Waterkeeper Alliance.

One of Humboldt Baykeeper's priorities is remediation of former industrial sites that are contaminated with dioxins, which are extremely long-lived chemicals that bind to sediment and soil. Dioxins are some of the most toxic compounds ever manufactured. They are powerful carcinogens and reproductive toxins that magnify as they move up the food web. In aquatic and marine environments, dioxins accumulate in fish, birds, marine mammals, and other fish-eating wildlife - and humans. Lumber mills, boatyards, and other industrial sites that operated from the 1940s until the late 1980s frequently used a wood preservative called pentachlorophenol (known as "penta") which contained dioxins. Due to the hazards to human health and the environment from these dioxins, the U.S. EPA banned the use of penta in lumber treatment and most other uses in the late 1980s (today it is restricted to use on power poles). Potential dioxin contamination near important waterways poses a risk to human health and the environment, and must be fully characterized and remediated prior to ground-disturbing activities, including well construction and grading.

Mailing Address: 600 F Street, Suite 3 #810
Office: 415 I Street, Arcata, CA 95521
(707) 499-3678
www.humboldtwaterkeeper.org



Humboldt Baykeeper believes an EIR and Phase II Site Assessment should be prepared to address contamination related to former lumber mill operations on the site, which is poorly addressed in the Phase I Environmental Site Assessment. *See, City of Redlands v. County of San Bernardino* (2002) 96 Cal.App.4th 398, 406 (“The negative declaration is inappropriate where the agency has failed either to provide an accurate project description or to gather information and undertake an adequate environmental analysis.”) The Mitigated Negative Declaration fails to disclose and analyze impacts to water quality, biological resources, and human health related to ground-disturbing activities that would be approved by the permits before you.

Any disturbance of contaminated soil cause by grading, excavation, and other heavy equipment use in or near an unremediated contamination site has the potential to have significant negative impacts to water quality, biological resources, and human health, which has not been adequately assessed, or mitigated to less than significant, in the MND.

The potential for contaminated groundwater to move off-site is especially concerning because of its proximity to the Mad River, which is the source of drinking water supplies for more than 80,000 people in Eureka, Arcata, McKinleyville, Blue Lake, Manila, Glendale, and Fieldbrook. The Mad River is also considered critical and/or essential habitat for salmonids, candlefish, and other aquatic species.

Pursuant to CEQA §15070(a), a Lead Agency shall prepare, or have prepared, a negative declaration or a Mitigate Negative Declaration when the Initial Study shows there is no substantive evidence, in light of the whole record before the agency, supporting a fair argument that the Project may have a significant effect on the environment.

Humboldt Baykeeper believes that the evidence clearly supports a fair argument that significant adverse impacts may occur due to the proposed Project, which is likely to substantially degrade the quality of the environment and cause substantial adverse effects on human beings, either directly or indirectly [CEQA Mandatory Findings of Significance §15065 (a)(1) and (a)(4)]. For these reasons, Humboldt Baykeeper strongly recommends that the Lead Agency prepare an EIR, and opposes the use of an MND for this proposed Project.

Humboldt Baykeeper believes that to avoid or mitigate potential impacts to groundwater, surface water, the Mad River, and human health and safety, it is necessary to conduct further analysis for the reasons enumerated below. Given the contaminants likely to be present on the site, the MND fails to ensure that construction and project-related ground disturbances will not result in the further spread of contamination. *See, Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster* (1997) 52 Cal.App.4th 1165, 1200 (“It is the *possibility*, of a significant effect . . . which is at issue, not a determination of the actual effect, which would be the subject of a negative declaration or an EIR” [italics in original].)

The Mitigated Negative Declaration for this project is inadequate due to the failure to identify potential significant impacts to the environment, specifically impacts to water quality, biological resources, and human health and safety related to hazards and hazardous materials associated with the site history as described above.

In addition, the project as proposed fails to comply with Humboldt County's Commercial Cannabis Land Ordinance, which states that for proposed development of commercial cannabis facilities on existing commercial, business park, or industrial sites, "[I]f a Phase I ESA indicates the presence or likely presence of contamination, the applicant shall prepare a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented prior to ground disturbance, which will be made a condition of approval for the project." (CCLUO 2018, Mitigation Measure 3.7-2a)

I. Use of Pentachlorophenol on the Subject Site

The subject parcel was used for part of the operations of the former McNamara & Peepe Lumber Mill and Blue Lake Forest Products. Recent groundwater monitoring on nearby parcels has found elevated levels of cadmium, chromium, lead, and pentachlorophenol, a wood preservative used to prevent fungus. This fungicide, known as "penta," was used at the mill until 1984, shortly before it was banned for use on lumber due to its high dioxin content.

In October 1968, a penta spill from the Molalla-Arcata Lumber Mill caused a massive fish kill in the Mad River. State wildlife biologists reported that more than 10,000 steelhead were killed immediately following the spill. In January 1969, the McNamara & Peepe mill spilled the chemical into the Mad River.

According to the Initial Study/Mitigated Negative Declaration,

The project site is located on land that was part of a much larger parcel that has been used for lumber processing by multiple companies for decades. Some of those lumber processing activities included using wood preservatives and anti-staining compounds, specifically pentachlorophenol and tetrachlorophenol, which are hazardous materials according to the California Department of Toxic Substances Control (DTSC). These materials were not used on or in the immediate vicinity of the subject parcel. [p. 38]

We dispute the conclusion that these materials were not used on or in the immediate vicinity of the subject parcel based on our review of the 2003 Report of Findings for Phase II Investigation, Blue Lake Forest Products/AalFs Property by Winzler & Kelly, which indicates that the project site was used for finished (treated) wood storage and sorter/planer operations (adjacent to the greenchain, where wood preservatives were applied (Winzler & Kelly 2003, Fig. 3: Historical Use Map, p. 17). According to the aerial images included in the report, these activities appear to have taken place from 1966-1988, when pentachlorophenol was used.

II. 1998 Remediation of Adjacent Contaminated Site has been Rescinded

The IS/MND goes on to state that "DTSC oversaw the remediation and monitoring of areas of the larger, former parcel that were found to have hazardous material contamination," concluding that the site contamination has been remediated [p. 38]. However, DTSC rescinded the 1998 Remedial Action Plan in December 2018, declaring that the concrete cap has failed to contain groundwater contaminated with the highly toxic wood preservative pentachlorophenol. DTSC is developing a new plan to remediate and/or control the contamination. It is unclear at this time to what extent the plume of contaminated groundwater may have migrated beneath the subject parcel.

DTSC says that the failure of the cap is related to much higher groundwater levels, which are now 15 feet higher than in 2002, when Blue Lake Forest Products closed and stopped pumping from an on-site well. Due to the higher groundwater levels, the contaminated soil has been in contact with groundwater for years.

Further sampling must be conducted prior to ground disturbing activities associated with development of the site to ensure that soil and/or groundwater contamination will not be mobilized, potential endangering Hall Creek, the Mad River, and construction workers.

Reliance on limited soil and groundwater sampling conducted in 2003 is inadequate to ensure that human health and the environment will be protected if this project is approved without further sampling.

III. Cadmium Detections in Soil

The IS/MND asserts that "In 2003, Winzler and Kelley, Consulting Engineers, conducted a Phase 2 Investigation of the broader area. Their investigation did not detect hazardous materials on the subject parcel, nor did their investigation find evidence that suggested hazardous materials were ever used on the subject parcel." [p. 38-39]

During the 2003 site assessment, soil and groundwater samples from the subject parcel were analyzed for contaminants associated with the former lumber mill operations on the site (Fig. 4, Boring Location Map, p. 19). Cadmium levels in three soil samples taken from the project area were found to be well above California Human Health Screening Levels (Table 1).

The California Human Health Screening Levels (CHHSLs) were developed by OEHHA on behalf of the California Environmental Protection Agency, pursuant to Health and Safety Code Section 57008.

Cadmium is considered on the Proposition 65 list of toxic compounds; it is listed as known to the State to cause developmental toxicity and male reproductive toxicity. 'Cadmium and cadmium compounds' listed as known to the State to cause cancer.

Table 1. Cadmium levels in soil at the site of the proposed Glendale Cannabis Factory¹ relative to California Human Health Screening Levels (CHHSLs)² in parts per billion (ppb) at various levels below ground surface (bgs).

CHHSL Soil-Screening Number for Commercial/Industrial Uses ²	B-10 from 6" bgs	B-11 from 6" bgs	B-11 from 5' bgs
7500	47	45	150

IV. Absence of Site on State and Federal Lists

The IS/MND asserts that "The subject parcel does not appear on the Cortese List. The site is not shown as containing hazardous materials or being involved in any cleanup or monitoring programs on the U.S. Environmental Protection Agency (EPA) EnviroMapper¹⁰, The California Department of Toxic Substances Control EnviroStor mapper¹¹, or the State Water Resource Control Board Geotracker¹²." [p. 39]

Absence of a site on any of these lists cannot be used as evidence that a site is free of contamination; these are not "presence/absence" databases. Similarly, lack of comments from the Regional Water Quality Control Board and/or Department of Toxic Substance Control must not be regarded by the County as evidence that there is no contamination present, or that either of the agencies' concerns have been addressed by the County's analysis.

V. Inadequate Analysis Results in Erroneous Findings

Based on what we believe to be erroneous information, the IS/MND asserts the following findings:

- a) The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. *Less than significant impact.*
- d) The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment. *No impact.*

¹ Winzler & Kelly, Report of Findings for Phase II Investigation, Blue Lake Forest Products/Aalfs Property 2003, Table 3.

² <https://oehha.ca.gov/chhsltable>

We dispute these findings based on our review of the 2003 Report of Findings for Phase II Investigation, Blue Lake Forest Products/AalFs Property by Winzler & Kelly, for the reasons enumerated above.

For these reasons, we strongly urge Humboldt County to prepare an Environmental Impact Report and a thorough Phase II Site Investigation focused on the proposed project site prior to approval of the Conditional Use Permit to further identify the extent and magnitude of contamination in soil and groundwater on the site, which is necessary to incorporate the most effective means of avoiding, minimizing, and mitigating these impacts to human health and the environment.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Kalt".

Jennifer Kalt, Director

jkalt@humboldtkeeper.org



Planning and Building Department
Planning Division
COUNTY OF HUMBOLDT
3015 H Street
Eureka CA 95501

SECTION 64 PAGE NO. 9

H.B.M.W.D. APR 15 2019

RETURN SERVICE REQUESTED

Important Public Hearing Notice

|||||
HUMBOLDT BAY MUNICIPAL WATER DISTRICT
PO BOX 95
EUREKA CA 95502-0095



COUNTY OF HUMBOLDT PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

NOTICE IS HEREBY GIVEN that the County of Humboldt, as Lead Agency, in accordance with the State California Environmental Quality Act (CEQA) Guidelines intends to adopt a Mitigated Negative Declaration (finding of no significant adverse environmental effect) on the project described below. **This notification is to advise you that the Humboldt County Planning and Building Department will receive public comments on the proposed Mitigated Negative Declaration from April 4, 2019 to May 3, 2019.**

PROJECT TITLE: Glendale Cannabis Facility

APPLICANT: Michael Brosgart & Arielle Brosgart

PROJECT DESCRIPTION: The project on parcel 516-111-064 is for a multi-use facility and consists of six separate applications: 13312, 13319, 13328, 13339, 13346 and 13360. Water and septic is provided to the site by Glendale-Fieldbrook Community Service District. 22 employees total are expected for operations. Power is provided by PGE. The project will require 32 parking spaces, two loading spaces, and two designated disabled parking spaces. LEAD APP: Application 13312 is a Conditional Use Permit for 10,000 square feet (9,860 + 140 office) of indoor cannabis cultivation. Cultivation will take place on the second floor of building "A". Three employees are expected for operations. Application 13319 is a Special Permit for a proposed 3,120 square foot (2,980 + 140 office) volatile manufacturing facility. The manufacturing facility occupies building "B". Manufacturing will include CO2 extraction, hydrocarbon based solvents, and food grade ethanol. Products produced from the manufacturing process include edible, topical, concentrate, and drink products for medical and adult use cannabis uses. Three employees are associated with this operation. Application 13328 is a Special Permit for a 4,440 square foot (4,300 + 140 office) non-volatile manufacturing facility. The manufacturing facility will be located in building "C". Four employees are associated with this operation. Application 13339 is a Special Permit for a 2,226 (2,086 + 140 office) square foot distribution facility. The distribution facility is located at the northeast corner of building "C". Three employees are associated with this operation. Application 13346 is a Special Permit for medical and adult use cannabis processing facilities totaling 9,000 square feet (8,860 + 140 office). The proposed processing facility located on the first floor of building "A" occupies 3,000 square feet, the proposed processing facility located on the second floor of building "A" occupies 1,600 square feet and the proposed processing facility located in building "C" occupies 4,400 square feet. Six employees are associated for this operation. Application 13360 is a Conditional Use Permit for a 6,710 (6,570 + 140 office) square foot wholesale nursery. The nursery is located in building "A". Four employees are associated with this operation.

PROJECT LOCATION: The project is located in the Blue Lake area, on the North side of Glendale Drive, approximately .12 miles West from the intersection of Swanson Lane and Glendale Drive, on the property known as 1691 Glendale Drive.

ADDRESS WHERE COPIES OF THE PROPOSED MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY ARE AVAILBLE FOR REVIEW AND WHERE COMMENTS MAY BE MAILED:

Humboldt County Planning and Building Department
3015 H Street
Eureka, CA 95501

The project and the proposed Mitigated Negative Declaration will be considered by the Humboldt County Planning Commission at the May 16, 2019 public hearing. A separate notice this hearing will be provided pursuant to Humboldt County Code 312-8 et seq.

Specific questions regarding the proposed project and the draft Mitigated Negative Declaration may be directed to Caitlin Castellano, Planner at (707) 445-7541.

April 5, 2019

CONTINUING BUSINESS

THIS JUST IN ... Final Phillips Survey of 2019 Finds Healthy Late-Spring Snowpack

May 2, 2019 [Maven](#) [Breaking News](#)

California's snowpack is cold and dense

From the Department of Water Resources:



The Department of Water Resources (DWR) today conducted the fifth and final Phillips Station snow survey of 2019. The manual survey recorded 47 inches of snow depth and a snow water equivalent (SWE) of 27.5 inches, which is 188 percent of average for this location.

Statewide, California's snowpack sits at 31 inches of SWE, which is 144 percent of average for this time of year. Snow water equivalent is the depth of water that theoretically would result if the entire snowpack melted instantaneously.

Today's readings will help hydrologists forecast spring and summer snowmelt runoff into rivers and reservoirs. The melting snow supplies approximately one-third of the water used by Californians.

"California's cities and farms can expect ample water supplies this summer," said DWR Director Karla Nemeth. "But it's critical that it's put to use replenishing groundwater basins and storage reservoirs for the next inevitable drought. Every resident and business can also help California by using water as efficiently as possible."

The snowpack's water content is the most important factor for water managers and hydrologists to measure because it is tied directly to water supply. Water content, however, varies from year to year depending on the air temperature and intensity and amount of precipitation. After a storm, the snow settles, compacts, and gets increasingly dense. As more snow falls, the snow beneath it will further compact. April 1 is typically the height of the year's snow water content. However, it is not until late spring and early summer when the intense sunshine becomes the key factor in snow melt and run-off.

"2019 has been an extremely good year in terms of snowpack," said Jon Ericson, DWR Chief of the Division of Flood Management. "Based on our surveys, we are seeing a very dense, cold snowpack that will continue to produce run-off into late summer."

The 2019 snowpack reached its peak on March 31 and is the fifth largest on record, based on more than 250 manual snow surveys conducted each month by the California Cooperative Snow Survey Program.

Both rain and snowpack runoff feed California's reservoirs. The state's largest six reservoirs currently hold between 96 percent (San Luis) and 128 percent (Melones) of their historical averages for this date. Lake Shasta, California's largest surface reservoir, is 108 percent of its historical average and sits at 93 percent of capacity.

DWR conducts up to five snow surveys each winter – near the first of January, February, March, April and, if necessary, May – at Phillips Station in the Sierra Nevada just off Highway 50 near Sierra-at-Tahoe. The Phillips snow course is one of hundreds that is surveyed manually throughout the winter. Manual measurements augment the electronic readings from about 100 snow pillows in the Sierra Nevada that provide a current snapshot of the water content in the snowpack.

WCB Stream Flow Enhancement Program
**HBMWD Stream Flow Enhancement for Benefit of Salmonids and other Special Status Species
 on the Mad River in Trinity and Humboldt Counties**
 Grant Agreement WC-1739BC

Grant Partners Meeting
 May 2, 2019, 11 AM
 Stillwater Sciences conference room, 850 G Street, Arcata, CA

Sheri Woo/HBMWD____ Michelle Fuller/HBMWD____ John Friedenbach/HBMWD____
 Sharon Kramer/HTH____ Dennis Halligan/SWS____ Pat Kaspari/GHD____
 Patrick Sullivan/GHD____ Richela Maeda/GHD____

Time	Topic and Speaker(s)	Decision Points or Action Items (to be filled in during meeting)
11:00	Settle in	None
11:05 to 11:30	Discuss David Aladjem's draft agenda for meeting with SWRCB. Round table discussion with all.	
11:30 to noon	Discuss draft project description table. Round table discussion with all.	
Noon to 12:15	Status check on deliverables and time table.	
12:15 to 12:30	Summarize and "to do" list (Sheri). Schedule next meeting.	

THE COMMUNITY IS INVITED !!!

Please plan to attend this community meeting to learn more about Nordic Aquafarms and their planned land-based fish farm facility on the Samoa Peninsula.

**Tuesday, May 21, 5:30-7pm
Wharfinger Building, Eureka**

Refreshments Provided



For more information contact
lynette@nordichumboldt.com

‘Time to give the port a 21st-century tune up’: Harbor looks to sustainable investments

Harbor district, energy authority looking to create a ‘clean’ industry future with aquafarm, offshore wind energy



Harbor district executive director Larry Oetker, left, Lynette Mullen, an independent project manager working with Nordic Aquafarms, and Matthew Marshall, executive director of Redwood Coast Energy Authority, speak during a panel at College of the Redwoods on Friday. (Rob Peach — The Times-Standard)

By **ROBERT PEACH** | rpeach@times-standard.com |

PUBLISHED: April 20, 2019 at 1:00 am | UPDATED: April 20, 2019 at 12:38 pm

The Humboldt Bay Harbor, Recreation and Conservation District and the Redwood Coast Energy Authority outlined plans Friday at the Humboldt County Economic Development Summit for infrastructure upgrades on the Samoa peninsula to build a land-based aquafarm and offshore wind energy project with an anticipated completion date of 2025 or 2026 — renewable energy projects that could have a significant positive impact on the county’s workforce development.

Establishing offshore wind energy

Matthew Marshall, executive director of the energy authority, said the agency has teamed with several companies outside of the area to complete a 100- to 150-megawatt project comprised of 10 to 15 wind turbines 20 to 30 miles off the coast of Eureka.

“All of these companies are interested in moving the project forward here in Humboldt,” Marshall said, noting the energy authority is conscious of concerns for wildlife habitat and has been in contact with the Humboldt Fishermen’s Marketing Association to minimize the project’s impact on commercial fishing.

“(The offshore wind energy project) goes from federal waters through state waters onto the land so every possible permitting agency that exists has to say, ‘Yeah, okay, we’re okay with it,’” Marshall added. “And so you know while that makes the permitting process complex, it ensures a high likelihood the end result is going to be something that really addresses these concerns.”

The next steps for the offshore wind energy project involve undergoing the Bureau of Ocean Energy Management leasing process taking place over the next year, according to Marshall. The energy authority is meanwhile entering the second year of a study to determine the dynamics of the project’s connection to the onshore power grid.

“The goal is to have Humboldt Bay be the staging point and potentially not just for our project but for other projects on the West Coast. But ... some work needs to be done,” Marshall said.

Constructing an aquafarm

Lynette Mullen, a local project manager whose primary focus is economic development, spoke to the county’s collaboration with Nordic Aquafarms, a producer of land-based aquaculture, to build a self-contained fish farming facility on the site of the defunct pulp mill.

Mullen noted that 90% of the seafood in the U.S. is imported and 50% of that is farmed. With an estimated population growth of 60 to 80 million people over the next 30 years, Mullen said, we must manage and maintain existing fisheries resources, scale up aquaculture to meet the demands of growth — with which the wild fishing industry cannot keep up — and address environmental concerns with strict standards.

“I mean this is an economic development project like we haven’t seen here in years and years, so it’s very exciting,” said Mullen, who assured the public that the fully contained factory fish farm, equipped with its own wastewater treatment facility, will raise traceable product, from egg to full-grown fish, without antibiotics and without the threat of sea lice.

Mullen was enthusiastic about the “synergies with academic institutions” in the area, not only for research but for workforce development. The project will result in 80 direct jobs, not including the workforce development required for construction and engineering as well as what will be required to move product once farmed.

Nordic Aquafarms, which staked out the area for its clean water, is in a “due diligence” process now, Mullen said.

“It’s been really great to work with (Nordic) because they’re very sincere in wanting to understand the community and be transparent about every step of the process,” said Mullen.

Rebuilding port infrastructure

Larry Oetker, executive director of the harbor district, concluded the panel with a discussion of plans for the overhaul of the port space necessary for housing the aquafarm facility and for facilitating the offshore wind energy project — an initiative with an estimated cost of \$400 million.

He began by highlighting the advantages of the Humboldt Bay port system, comprised of 1,000 acres of coastal-dependent industrial lands, much of which is “vacant” and “underutilized,” and which is only three hours away from access to a web of national highways.

“We’re a world-class port,” Oetker began. “A lot of times, we don’t think about it being a world-class port, but we are.”

Much of the development the harbor district is aiming for hinges on Samoa’s “renovation and expansion,” said Oetker, who reported the town is ready to subdivide all existing homes as part of a Coastal Commission-approved “master plan” for updated infrastructure: new sewer, water and fire lines; a new business park; and a “brand-new” wastewater treatment plant on the peninsula. Oetker said there can be no new development without these infrastructure upgrades.

He referred to what the harbor district calls “Redwood Marine Terminal 1” — the first dock on the left past the Samoa bridge — as the site of the wind energy project. The “Redwood Marine Terminal 2” is the site of the old pulp mill that will be leased to Nordic Aquafarms. Oetker noted the old mill site is ideal for the aquafarm because it already has an ocean-drainage system in place that is well-suited to the mechanics of fish farming.

“The assets on this place are just amazing and they’re tailor-made for the aquaculture industry,” he said.

Nordic will be responsible for and pick up the costs of decontaminating the mill grounds, including the demolition of the tall buildings and smokestacks on the site. The district is looking to build “aquaculture clusters” on these sites, which will currently house 22 tenants, or coastal dependent business operations such as Nordic, Pacific Flake, Taylor Seafood, among others.

According to Oetker, the offshore wind energy project alone would produce “14,000 direct construction and operation jobs” and generate “\$20 to \$50 billion in gross domestic product for the state from construction, operations and functions.”

As for the projected \$400 million price tag on port upgrades, Oetker and Mullen both referred to it as an “investment” that, Oetker said, creates a “significant tax base for our community.”

“Our aging infrastructure is in severe decline and we need to attract clean, modern industry that’s going to be here for the next 20, 30, 50 years,” Oetker said, ending his presentation with an injunction: “It’s time to give the port a 21st-century tune up!”

What’s next

The panel is confident in the proposed projects — as sources of revenue for the county, as methods to build a strong and sustainable workforce comprised of partnerships between developers and local businesses as well as area academic institutions, and as a way to ultimately reduce the county’s carbon footprint. In the meantime, public involvement is indispensable.

In terms of impacts on the commercial fishing industry, which was a concern voiced during public comment, the panel agreed that it would be minimal.

“With these kinds of scales ... we can actually improve the industry and give (fishermen) access to markets that they currently don’t have because they’re too diversified,” said Oetker.

Mullen reiterated that the aquafarm project will not displace the wild fishing industry; instead it will displace the farming culture.

“(Nordic) is not looking to compete with the wild-caught salmon market,” she said, adding the aim is to build “aquaculture clusters focused on farming.”

Rob Peach can be reached at 707-441-0503.

Cannabis code enforcement up 700% in 2018, brought in \$2 million for Humboldt County

'Where we expected a boom, we got a bust,' says local attorney



The use of satellite imagery boosted cannabis code enforcement by an estimated 700% in 2018. That led to the county pulling in more than \$2 million from the fines associated with the abatement notices. (Humboldt County Sheriff's Office contributed)

By **RUTH SCHNEIDER** | rschneider@times-standard.com | Eureka Times-Standard
May 9, 2019 at 1:24 am

Using data and imagery provided by a private satellite company, cannabis code enforcement in Humboldt County increased an estimated 700 percent in 2018, according to the county's planning and building department.

Prior to April 2018, when the county first contracted Planet for the satellite imagery and data, there were "far less than 100 (citations) per year," said Humboldt County Planning and Building deputy director Bob Russell.

"Last season in our pilot year, we did just under 700 using the satellite imagery," he said. "It's also important to understand the enforcement (prior to April 2018) was complaint-driven action whereas now, Humboldt County has mandated we do active enforcement on unpermitted cannabis. It has indeed produced the desired effect with respect to unpermitted cannabis cultivation without having to drive around the county."

The county notifies residents of the citations through "abatement" notices — about 1,400 of which were published in the Times-Standard in 2018 because each notice must be published twice. Those notices are for unpermitted commercial cannabis cultivation, unpermitted structures such as a greenhouse and potentially for environmental violations such as unpermitted grading or streamside management violations. Each violation carries with it fines that can be as much as \$10,000 or more and accrue daily until addressed.

In January, the county board of supervisors voted to extend the contract with Planet until December 2020. The staff report at the time noted extending the contract "allows staff to efficiently conduct critical code violations at a much higher volume than is possible using only static images."

The contract with Planet costs the county about \$200,000 per year. The services rendered through Planet only operate between March and November of each year.

The program more than pays for itself with the county billing for more than \$3 million in 2018 and receiving upwards of \$2 million from those cited for cannabis cultivation violations.

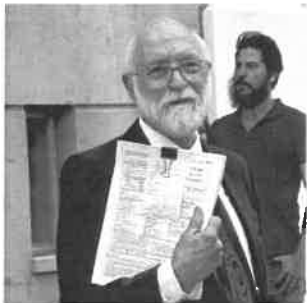
"I think we've made it clear that it's probably a bad idea and the opportunity to face a violation is pretty substantial under this new program," Russell said. "Larger operations — we're not seeing as much this year. It's not to imply this problem has gone away. The message is out there that this is now a thing and this is not going to go away."

Eugene Denson, a Southern Humboldt County-based attorney who specializes in cannabis law, said the ramping up of code enforcement is having a significant effect on the industry. And it's one factor in why, he believes, small cannabis operations are shuttering — something that is impacting the local economy.

"There are a lot of vacant storefronts in Garberville," he said. "Where we expected a boom, we got a bust."

The code enforcement actions have produced a sizeable amount of business for Denson, who estimates "10 percent" of the about 690 cannabis citations in 2018 came to him for legal advice.

He said between the high cost of the permitting process and cannabis taxes paired with the citations issued through code enforcement, it's driving people away. In 2018, Denson sued the county over what he alleged were illegal changes to the cannabis tax law Measure S.



Humboldt County attorney Eugene Denson holds the lawsuit he filed against the county over cannabis taxes. He said the increase in code enforcement has hurt small businesses. (Times-Standard file)

"Most of the people that get abated, if they are in the cannabis business, they get out of it," Denson said. "... It is such a hassle and so expensive, it doesn't seem worth it. I had licensing clients who have spent their life saving and they still haven't got (permits). So they sell their land and leave."

He also said that it seems to have an unintended consequence of targeting mom-and-pop operations.

"The county implementation of legalization has been a disaster financially for the county, especially here in the south county," he said. "The combination of the licensing process itself being a never-ending nightmare and the abatement program becoming effective has driven a number of people out of the business."

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



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov



May 8, 2019

John Friedenbach, General Manager
Humboldt Bay Municipal Water
828 7th Street
Eureka, CA 95501

Subject: Review of Revised Dreissenid Mussel Prevention Plan

Dear Mr. John Friedenbach:

Thank you for submitting your revised draft Dreissenid Mussel Prevention Plan (Plan) for Ruth Lake. California Department of Fish and Wildlife's (Department) Invasive Species Program staff has reviewed the draft Plan, which was revised based on the recommendations and comments the Department provided you in April 2019.

The revised Plan submitted to the Department on April 26, 2019, meets the minimum prevention program/written Plan requirements defined in California Code of Regulations Title 14 section 672.1 (b). As submitted, the Plan has been deemed sufficient and accepted by the Department as the final Plan for Ruth Lake.

To demonstrate implementation of the Plan, Humboldt Bay Municipal Water District/Ruth Lake Community Services District is required to submit annual reports (January 1 – December 31) to the Department by March 31 of each year. The annual reports should summarize any changes in the reservoir's vulnerability to mussel introduction, mussel monitoring results, and management activities.

The Department appreciates the continued efforts Humboldt Bay Municipal Water District is making to prevent the spread of dreissenid mussels in California, while also continuing to provide the public with recreational opportunities.

We look forward to continued collaboration and receipt of your annual reports. If you have questions, training needs, or require assistance, please contact L. Breck McAlexander, Northern Region, Invasive Mussel Prevention Coordinator, at (530) 225-2317 or by e-mail at Louis.Mcalexander@wildlife.ca.gov.

Sincerely,

Tina Bartlett
Regional Manager

ec: Tina Bartlett, L. Breck McAlexander, Martha Volkoff, Elizabeth Brusati, Andrew Jensen
California Department of Fish and Wildlife
Tina.Bartlett@wildlife.ca.gov, Louis.McAlexander@wildlife.ca.gov,
Martha.Volkoff@wildlife.ca.gov, Elizabeth.Brusati@wildlife.ca.gov,
Andrew.Jensen@wildlife.ca.gov

New Business

Proposal for Art Murals on New Navy Base Road Concrete Vaults

Prepared by the Peninsula Community Collaborative for the Humboldt Bay Municipal Water District's Board of Directors' meeting on May 16, 2019 (created May 8, 2019)

Project Background

- **About the Peninsula Community Collaborative** – The Peninsula Community Collaborative (PCC) is a resident-led group of community members from the neighborhoods of the Samoa Peninsula, including Manila, Samoa, Finnetown and Fairhaven. The PCC has worked together since 2015 with support from Redwood Community Action Agency (RCAA), which serves as a fiscal sponsor and provider of staff support to organize the PCC's efforts. The PCC currently has funding from the St. Joseph Health Community Benefit Fund's Community-Building Initiative (CBI) to improve the feeling of safety on the Peninsula. This improvement is being measured by a *reduction in places where people do not feel safe*. The PCC is funded by CBI to conduct this work through September 30, 2020.
- **Existing Condition of the HBMWD Concrete Vaults and Impact** – There are 3 visible concrete vaults adjacent to the roadway along New Navy Base Road, near the communities of Finnetown and Fairhaven. Over the past couple of years, they have been heavily graffitied, often with foul language (see photos below). The PCC feels the graffiti is a visible sign of neglect, and invites more graffiti in their neighborhoods. Since the towns of Fairhaven and Finnetown are not visible from New Navy Base Road, residents also feel that people do not see the community as a place where people live and have a sense of pride. The graffiti, dumping of trash and abandoned vehicles, and nefarious activity are commonplace occurrences, and residents feel it is in part because of the perception that the Peninsula is an unoccupied "no man's land"/ post-industrial landscape that is not taken care of. Residents are seeking to improve the image of the community and show that people care about and live on the Peninsula. One idea that arose recently was to paint the vaults with beautiful art.



Above: one of the concrete vaults bore this message for many months.



Above: one of the concrete vaults. All 3 vaults are located along New Navy Base Road between DG Fairhaven Power and the Samoa Field airport/ drag strip.

- **Similar Public Art Projects on Public Infrastructure in the Region** – There are multiple examples of placemaking and public art on public utilities and infrastructure in the Humboldt County area. These include the artistic painting of utility boxes in Eureka (which were once heavily graffitied), the painted intersection in Arcata’s Creamery District, and the Eureka Street Art Festival, which included painting of regularly-graffitied walls and public benches. In Eureka, artists are invited to submit designs, are sponsored by local organizations or businesses, receive a stipend to complete the project, and fill out a contract agreeing to paint the piece in accordance with specific requirements. These requirements included, in the case of the utility boxes, that the artist clean the surface before painting only with a biodegradable soap and manual cleaning techniques, that the surface be painted with a durable paint intended for long-term outdoor use, and that it be covered with two coats of UV-resistant acrylic varnish to preserve the life of the art and to make any subsequent graffiti removal much easier. The majority of the boxes and murals in Eureka can be cleaned with a graffiti removal product due to the coatings of varnish that have been applied, should any graffiti occur. However, the instances of graffiti have been greatly reduced by the presence of other art on these surfaces.
- **The PCC’s Steps Taken to Date** – The PCC has held conversations with more than 400 Peninsula residents and stakeholders to understand community concerns over the course of multiple years. Graffiti is a recurring concern, and the idea of painting the vaults was generated by Fairhaven residents and vetted within the PCC at their monthly meetings. The PCC identified the Eureka utility box art program as a good model to replicate, and learned that the infrastructure belonged to HBMWD. The PCC has copies of the contracts used for Eureka’s public art projects, which provide language for a prospective contract with artists and considerations for application of paint to public utilities. RCAA staff reached out to HBMWD’s general manager and board chair to float this idea initially, and plan to meet staff for a site walk on Friday, May 10 to discuss the concept and specifications further.

Mural Installation Process

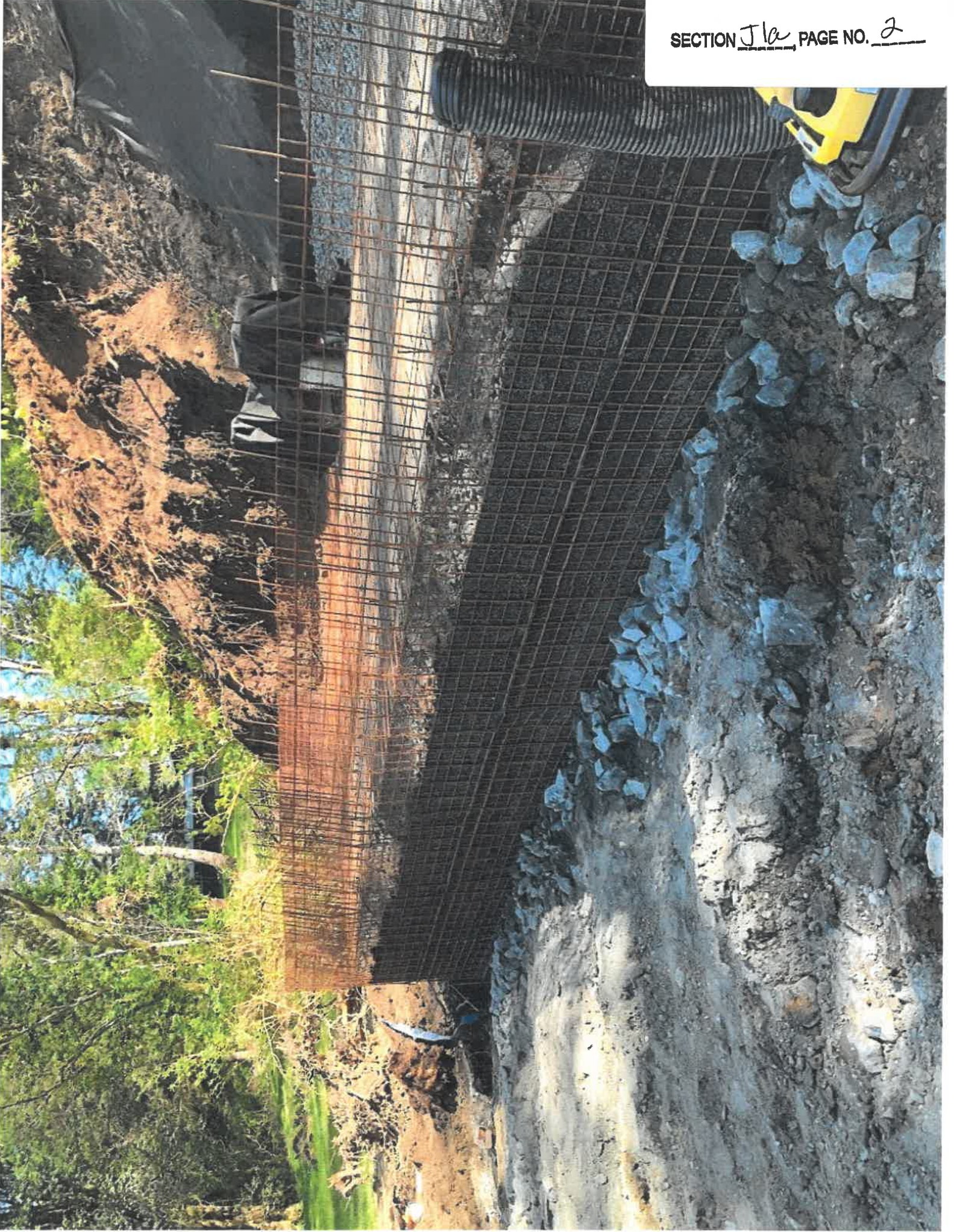
- **Materials to be Used** – Paint, UV-resistant varnish and painting supplies (brushes, rollers, cleaning supplies, etc) would be provided by the artist and will be of a type intended for long-term outdoor use in a highly sandy and windy, erosive environment.
- **Funding for Artist's Work and Insurance** – Artists will receive a \$500 stipend per mural, paid by RCAA. This is comparable to the Eureka utility box stipend. The utility boxes are smaller, but are more complex surfaces to paint. RCAA will provide liability insurance to cover the artists while they are painting on site.
- **Proposed Artist Invitation and Selection Process** – The PCC will create a call for artist submissions and publish it publicly for artists to submit designs. Artists who live or work on the Samoa Peninsula will have the opportunity to earn extra points in the scoring of their proposals. The panel reviewing the art submissions can include RCAA staff, PCC community leaders, HBMWD staff or board, as desired. The PCC will work with HBMWD to determine the criteria for reviewing the art, or can use a similar criteria to the City of Eureka's criteria, which included aesthetic interest, appropriateness (no objectionable material), etc.
- **Proposed Timeline** – The PCC would like to advertise for artists in June and early July, review and select artists by mid-August, and have the selected artists complete the murals in September or early October 2019.

Maintenance Expectations

- **From Fall 2019 – Fall 2020** – The PCC will remove any graffiti as needed/ as feasible. In Eureka, utility box painters agreed to maintain the box for the initial few years, but this has already proved to be infeasible as artists have moved, etc. However, there has been no damage to the boxes thus far. The maintenance requirement for artists is unlikely to be enforceable, though, so it has been dropped here.
- **After Fall 2020** – HBMWD would maintain, but residents with the PCC could help with minor defacing with the highly-effective Tagster graffiti removal product or could provide the Tagster product to HBMWD for their use as needed.

Engineering

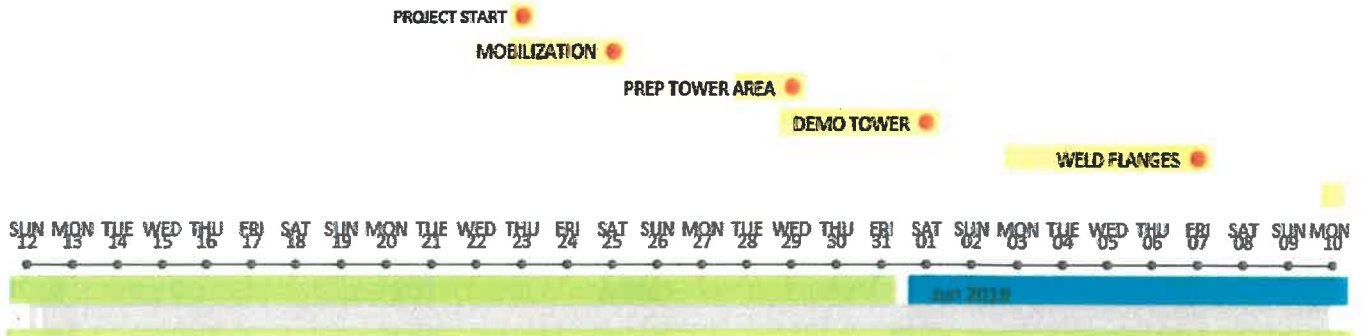








Tower Demo Project



ENTER START DATE: **5/8/2019**

ACTIVITY	START	END	NOTES
Project Start	5/23/2019		
Mobilization	5/23/2019	5/25/2019	
Prep Tower Area	5/26/2019	5/29/2019	
Demo Tower	5/29/2019	6/1/2019	
Weld Flanges	6/3/2019	6/7/2019	
Clean up / Demobilization	6/10/2019	6/14/2019	
Complete Project	6/14/2019	6/14/2019	
Milestone 7	6/24/2019		
Milestone 8	7/4/2019	7/6/2019	
Milestone 9	7/14/2019	7/16/2019	
Milestone 10	7/24/2019	7/26/2019	
Project End	8/3/2019		



April 24, 2019

Mr. John Friedenbach
General Manager
Humboldt Bay Municipal Water District
PO Box 95
Eureka, CA 95502

Subject: Time Extension Approval # 1
FEMA-4240-DR-CA, Valley & Butte Fires
Cal OES PJ0017, FEMA 0024, HBMWD 12kV Switchgear Relocation
Subrecipient: Humboldt Bay Municipal Water District, FIPS: 023-91000

Dear Mr. Friedenbach:

The California Governor's Office of Emergency Services (Cal OES) received your letter on March 6, 2019, requesting an eighteen-month time extension to March 22, 2021, for completion of the HBMWD 12kV Switchgear Relocation Project. The current approved completion date for the project is September 22, 2019. Cal OES reviewed the history of this project and has determined that the time extension is warranted based on the factors listed in your letter. Specifically, the Grant award letter from FEMA was dated May 24, 2018 with the completion date of September 22, 2019, thus only allowing 16 months for completion. The true performance period for this grant is in fact 36 months.

The approved budget and scope of work remain unchanged for this project. A time extension is approved for eighteen months and all work for this project must be completed by March 22, 2021.

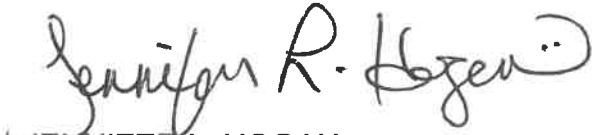


Mr. Friedenbach
April 24, 2019
Page 2

SECTION Jlc, PAGE NO. 2

If you have any questions, please contact Concepcion Chavez, Hazard Mitigation Grants Specialist at (916) 845-8854 or Concepcion.Chavez@caloes.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer L. Hogan". The signature is written in black ink and includes a small smiley face at the end.

JENNIFER L. HOGAN
State Hazard Mitigation Officer

cc: Robert McCord, Hazard Mitigation Assistance Chief, FEMA, Region IX
Katie Grasty, Hazard Mitigation Assistance Specialist, FEMA Region IX



April 12, 2019

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

H.B.M.W.D. APR 26 2019

Subject: Subapplication in FEMA Review
Hazard Mitigation Grant Program
FEMA-4344-DR-CA, October 2017 California Wildfires
Cal OES PJ0040, HBMWD Reservoirs Seismic Retrofit
Subapplicant: Humboldt Bay Municipal Water District, FIPS: 023-91000

Dear Mr. Friedenbach:

The California Governor's Office of Emergency Services (Cal OES) received and reviewed your subapplication requesting funds from the Hazard Mitigation Grant Program (HMGP). Cal OES has submitted your grant subapplication to the Federal Emergency Management Agency (FEMA) for grant review and funding consideration.

Please include "FEMA-4344-DR-CA, Cal OES PJ0040" in the subject line of any future written or email correspondence with Cal OES, related to this project, so that we may reference it in our tracking systems.

Should you have any questions, please contact Concepcion Chavez, Hazard Mitigation Grants Specialist, at (916) 845-8854 or Concepcion.Chavez@caloes.ca.gov.

Sincerely,

RON MILLER
Division Chief



Subject: FW: ASCE Project of the Year Nomination
Attachments: Awards Banquet 2019 Flyer.pdf

From: North Coast <NorthCoast@asce-sf.org>
Sent: Tuesday, April 23, 2019 10:03 AM
To: Pat Kaspari <Pat.Kaspari@ghd.com>
Cc: Nathan Stevens <Nathan.Stevens@ghd.com>; Michelle Davidson <davidsonlmichelle@gmail.com>
Subject: Re: ASCE Project of the Year Nomination

Hello Pat,

Congratulations, the Humboldt Bay Municipal Water District, Mad River Crossing Pipeline Replacement Project has won the majority of votes for Project of the Year for the North Coast Branch of ASCE! The award will be presented at the upcoming Awards Banquet on Wednesday, May 1 (see attached flyer). Please let Michelle Davidson know the final RSVP count. If you have any questions, feel free to give her a call at 707-601-1080.

Thank you,
Tai Morgan-Marbet, North Coast Branch President

On Fri, Mar 29, 2019 at 2:03 PM Pat Kaspari <Pat.Kaspari@ghd.com> wrote:

Dear North Coast Branch ASCE,

Please see the attached nomination for the Project of the Year for the Humboldt Bay Municipal Water District, Mad River Crossing Pipeline Replacement. Feel free to let me know if you require any additional information. We appreciate your consideration.

Patrick Kaspari, PE
Associate Engineer

GHD
T: 707 443 8326 | F: 707 444 8330 | C: 707 599 5123 | V: 842262 | E: pat.kaspari@ghd.com
718 Third Street, Eureka, CA 95501, USA | www.ghd.com

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TRANSPORTATION

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SECTION J 1 PAGE NO. 8

ASCE
American Society of Civil Engineers
Presents The
2019 Project of the Year
To
Humboldt Bay Municipal Water
District & GHD Inc.
For The
Mad River Crossing Pipeline
Replacement Project

Civil Engineers Grade California's Infrastructure with a C-

POSTED 6:51 PM, MAY 7, 2019, BY OLIVIA DEGENNARO, UPDATED AT 05:53PM, MAY 7, 2019
SACRAMENTO -- One doesn't have to look far to realize California's infrastructure is deteriorating.

"California has a number of challenges that we are struggling to keep up with. First of all, our infrastructure is aging and we also have a growing population," John Hogan, co-chair of the California Report Card Committee, told FOX40.

Failing power lines and crumbling roads are just some of the major issues highlighted in the American Society of Civil Engineers' 2019 report card.

It's an analysis that comes out every six years, grading 17 different areas of infrastructure including waterways, aviation and schools.

This year, California received an average grade of C-, getting C's and D's in all 17 categories.

"Transit, rail, schools, parks, wastewater, I mean it goes on and on and on and, yes, a lot of those categories are items that people take for granted, don't think about," Hogan said.

The energy sector received the lowest grade in the report -- a D-.

Engineers say most power systems in the state are not well-equipped to handle future disasters.

"Aging equipment, inferior design and poor right-of-way vegetation management have caused infrastructure incidents, and in some cases, unfortunately, wildfires," committee co-chair Tony Akel said.

Engineers also pointed to other recent disasters, like the collapse of the Oroville Dam spillway to show why more maintenance is needed. They say most dams in the state are at least 50 years old.

"Dams provide 70 percent of California's water supply, 15 percent of the power, flood control and recreation," Akel said.

But the biggest hurdle in making these repairs is funding. Engineers say the state faces billions of dollars in the cost of maintenance that has been delayed.

That's why they met with lawmakers at the State Capitol, urging them to adopt policies to support infrastructure, and they say failing to act now could cost Californians six times as much in the future.

2019 Report Card for California's Infrastructure

Californians use infrastructure each day. Our roads, bridges, and transit networks allow us access to our iconic coastlines, lakes, and vineyards. Water systems deliver clean drinking water to our homes, communities, and businesses. School buildings provide a safe place for our children to learn. Wastewater collection and treatment systems protect our lakes, rivers, and beaches from raw sewage, E. coli and other toxins.

Our infrastructure systems play a critical role in continued economic prosperity and the preservation of our quality of life. Unfortunately, our state's infrastructure renewal and replacement programs have been significantly underfunded for a long time. While the state Legislature, municipalities, and California voters have made strides in recent years to raise additional revenue for our infrastructure, we have a lot of catch-up to do, and large funding gaps remain.

Additionally, we're facing significant new challenges. In May 2018, California's economy surpassed that of the United Kingdom to become the world's fifth largest. Over the next 20 years, California's population is expected to grow by another 25% by over 10 million people. This economic activity and new population requires additional supporting infrastructure. Meanwhile, the climate is changing. California is already grappling with precipitation whiplash – extreme periods of drought followed by extreme periods of rainfall – and sea level rise and increasingly severe storms are also expected.

As the stewards of our infrastructure, California's civil engineers have a moral duty to advocate for sustainable infrastructure capable of supporting our state's robust economy, while maintaining public safety and our quality of our life. Join us in our mission to increase infrastructure investment to repair our existing networks and plan for California's future.

REPORT CARD FOR

CALIFORNIA'S

INFRASTRUCTURE

2019



GOLDEN GATE BRIDGE ON A SUNNY DAY IN SAN FRANCISCO
COPYRIGHT: ANDY777

REPORT CARD FOR CALIFORNIA'S INFRASTRUCTURE

Region 9 of the American Society of Civil Engineers

INFRASTRUCTUREREPORTCARD.ORG/CALIFORNIA

MAY 2019



EXECUTIVE SUMMARY

Californians use infrastructure each day, with or without realizing it. **Infrastructure** includes facilities and structures **providing essential services to residents** of a city, county, or state. Infrastructure includes Aviation, Bridges, Dams, Drinking Water, Energy, Hazardous Waste, Inland Waterways, Levees, Ports, Public Parks, Rail, Roads, Schools, Solid Waste, Stormwater, Transit, and Wastewater facilities, each of which are evaluated in this report. These 17 infrastructure categories were each assessed on capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation.

In May 2018, California's economy surpassed that of the United Kingdom to become the world's fifth largest. Over the next 20 years, California's population is expected to grow by another 25% or over 10 million people. A strong and sustainable infrastructure is imperative to the continued **economic prosperity** Californians enjoy; it is also important for our **public safety**, and our **quality of life**.

For example, our transportation system, which includes roads, bridges, transit and rail, allows Californians to travel to work, access our iconic coastlines, lakes, and vineyards, and receive packages from online retailers. Water systems deliver clean drinking water to our homes, communities, and businesses. School buildings provide a safe place for our children to learn. Wastewater collection and treatment systems protect our lakes, rivers, and beaches from raw sewage, E. coli and other toxins.

All infrastructure deteriorates with time, and can fail prematurely unless rigorous maintenance programs are implemented. What happens when infrastructure fails?

- In February 2017, Oroville Dam's Emergency Spillway failed resulting in the emergency evacuation of over 180,000 nearby residents causing disruption, economic impact and public safety concerns.
- In July 2014, a 92 year-old 30-inch Los Angeles water main failed flooding Sunset Boulevard and portions of the UCLA campus causing significant damages to both public and private properties.

Googling "water main breaks" in California will unfortunately yield a very long list of infrastructure failure stories covered by the media, and many more occur every day that don't receive media attention. As





EXECUTIVE SUMMARY (CONT.)

our California infrastructure continues to age, the frequency of failure will increase significantly, unless we take corrective measures.

This report assigns a letter grade to each category and to the overall report card, to more effectively communicate the general state of our California infrastructure to state and local legislators, as well as to the public. The grade is based upon a simple "A through F" school report card format: "A" for Exceptional, Fit for the Future, "B" for Good, Adequate for Now, "C" for Mediocre, Requires Attention, "D" for Poor, At Risk, and "F" for Failing/Critical, Unfit For Purpose. The 2019 California Infrastructure Report Card gave the overall infrastructure a **grade of C-**, which means California's infrastructure is **in mediocre condition and requires attention**.

Infrastructure maintenance, renewal and replacement programs are critical for sustaining California's economic engine, but funding constraints continue to severely delay much-needed improvements. Our state's infrastructure renewal and replacement programs have been significantly underfunded for a long time. While the state legislature, municipalities, and California voters have made strides in recent years to raise additional revenue for our infrastructure, we have a lot of catch-up to play, and **large funding gaps remain**.

This report card, and the grade, are not meant to be not a commentary on agencies and their personnel's performance, as we know they are doing the best they can with the limited available resources. This report card should serve as a tool to help us request the resources needed to more adequately maintain our infrastructure and plan for the future.

To raise California's infrastructure grade, ASCE developed the following four recommendations:

- Promote effective and collaborative **leadership**.
- Develop **smart plans** to better identify funding needs.
- Increase state and local **funding**.
- Inform the public and raise **awareness**.

Each chapter in this report includes additional recommendations specific to each assessed infrastructure category. As the stewards of our infrastructure, California's civil engineers have a moral duty to advocate for sustainable infrastructure capable of supporting our state's robust economy, while maintaining public safety and our quality of our life. Join us in increasing infrastructure investment as it is a high priority for California.



GRADING METHODOLOGY

The 2019 Report Card for California's Infrastructure was completed by a committee of over 100 professionals and experts from California who dedicated their valuable time to collect and evaluate existing data, assess the infrastructure, document their findings, and develop recommendations. The committee worked with staff from ASCE National and ASCE's Committee on America's Infrastructure to provide a snapshot of our infrastructure, as it relates to us at home, and on a national basis.

The Report Card Sections are graded based on the following eight criteria:

CAPACITY Does the infrastructure's capacity meet current and future demands?

CONDITION What is the infrastructure's existing and near-future physical condition?

FUNDING What is the current level of funding from all levels of government for the infrastructure category as compared to the estimated funding need?

FUTURE NEED What is the cost to improve the infrastructure? Will future funding prospects address the need?

OPERATION AND MAINTENANCE What is the owners' ability to operate and maintain the infrastructure properly? Is the infrastructure in compliance with government regulations?

PUBLIC SAFETY To what extent is the public's safety jeopardized by the condition of the infrastructure and what could be the consequences of failure?

RESILIENCE What is the infrastructure system's capability to prevent or protect against significant multihazard threats and incidents? How able is it to quickly recover and reconstitute critical services with minimum consequences for public safety and health, the economy, and national security?

INNOVATION What new and innovative techniques, materials, technologies, and delivery methods are being implemented to improve the infrastructure?



GRADING SCALE



EXCEPTIONAL: FIT FOR THE FUTURE

The infrastructure in the system or network is generally in excellent condition, typically new or recently rehabilitated, and meets capacity needs for the future. A few elements show signs of general deterioration that require attention. Facilities meet modern standards for functionality and are resilient to withstand most disasters and severe weather events.



GOOD: ADEQUATE FOR NOW

The infrastructure in the system or network is in good to excellent condition; some elements show signs of general deterioration that require attention. A few elements exhibit significant deficiencies. Safe and reliable with minimal capacity issues and minimal risk.



MEDIOCRE: REQUIRES ATTENTION

The infrastructure in the system or network is in fair to good condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies in conditions and functionality, with increasing vulnerability to risk.



POOR: AT RISK

The infrastructure is in poor to fair condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration. Condition and capacity are of significant concern with strong risk of failure.



FAILING/CRITICAL: UNFIT FOR PURPOSE

The infrastructure in the system is in unacceptable condition with widespread advanced signs of deterioration. Many of the components of the system exhibit signs of imminent failure.



2019 REPORT CARD FOR CALIFORNIA'S INFRASTRUCTURE



AVIATION	C+	PORTS	C+
BRIDGES	C-	PUBLIC PARKS	D+
DAMS	C-	RAIL	C
DRINKING WATER	C	ROADS	D
ENERGY	D-	SCHOOLS	C
HAZARDOUS WASTE	C-	SOLID WASTE	C-
INLAND WATERWAYS	D	STORMWATER	D+
LEVEES	D	TRANSIT	C-
		WASTEWATER	C+

NOTES ABOUT THE GRADES

Across the country, budget issues, and deferred maintenance are taking their toll on critical infrastructure systems constructed by the generations before us and which now must be maintained and modernized.

The analysis in this report card and associated grades, are intended to increase understanding by the public and the state and local legislators, of the importance and value of long-term consistent infrastructure investments, the importance of

leadership and planning, and the need to prepare for the future.

The Grades reflect the condition of the infrastructure, and not the diligent local agency personnel who are doing their best to manage, repair, renew, and replace aging systems, with the limited available resources. Rather, this Report Card is intended to reflect current infrastructure conditions and be a tool to help agencies request and receive the resources they need.



RECOMMENDATIONS TO RAISE THE GRADE

To Raise California's Infrastructure grade, ASCE developed the following four recommendations: 1) Promote effective and collaborative **leadership**, 2) Develop **smart plans** to better identify funding needs, 3) Increase state and local **funding**, and 4) Inform the public and raise **awareness**.

1. PROMOTE EFFECTIVE AND COLLABORATIVE LEADERSHIP

The Challenges of addressing California's aging infrastructure will require effective public and private leadership coupled with implementation of sustainable practices.

- **Continue to promote effective infrastructure leadership** within agencies, and empower leaders in key positions with applicable decision-making authority.
- **Streamline the project permitting process** across infrastructure sectors, with safeguards to protect the natural environment, to make regulatory requirements clearer, bring priority projects to reality faster, and **secure cost savings**.
- **Encourage Leaders** from all levels of government, business, labor, and nonprofit organizations to **come together and collaborate** to ensure all investments are spent wisely, prioritizing projects with critical benefits to the economy, public safety, and quality of life.

2. DEVELOP SMART PLANS TO BETTER IDENTIFY FUNDING NEEDS

One of the more important smart plans an agency can develop is an asset management plan, which enables them to make informed decisions on where - and when - to spend limited public funds.

- **Advocate for the enactment of Asset Management Plans**, which will assist state and local agencies in maintaining a desired level of service expected by the customer, with the most strategic use of limited available funding.
- **Enact policies that require high quality data gathering**, tracking, and regularly scheduled maintenance on existing infrastructure assets.
- **Perform life cycle cost analysis and risk analysis**, and develop Renewal and Replacement Plans to repair or replace failing infrastructure at the right time.
- **Develop operations and maintenance (O&M) strategies** to avoid having to repair infrastructure systems after they fail as this approach has adverse consequences, including higher repair costs, customer service interruptions, and property damage.
- Require all projects greater than \$5 million to use **life cycle cost analysis** and develop a funding plan to support capital, operation and maintenance costs until the end of the project's service life.

RECOMMENDATIONS TO RAISE THE GRADE (CONT.)

3. INCREASE STATE AND LOCAL FUNDING

Each category evaluated in this Report indicates currently available funding to state and local agencies is not adequate to maintain sustainable and safe California infrastructure systems.

- **Establish long-term agency funding strategies**, based on thorough evaluations of existing capacity and conditions, O&M needs, and the intended levels of service.
- Garner public and legislative support for **legislation that will generate new and sustained revenue sources for all aging infrastructure systems**. Examples of such legislation include the Road Repair and Accountability Act of 2017 the State Revolving Funds program.
- **Support local efforts to increase funding** for infrastructure including sales tax measures, Enhanced Infrastructure Financing Districts, and other measures.
- **Create incentives** for state and local governments and the private sector to invest in maintenance, upgrades, repairs, and replacement of infrastructure.
- **Support research and development into innovative new materials, technologies, and processes** to modernize and extend the life of infrastructure, expedite repairs or replacement, and promote cost savings over the life of the asset.

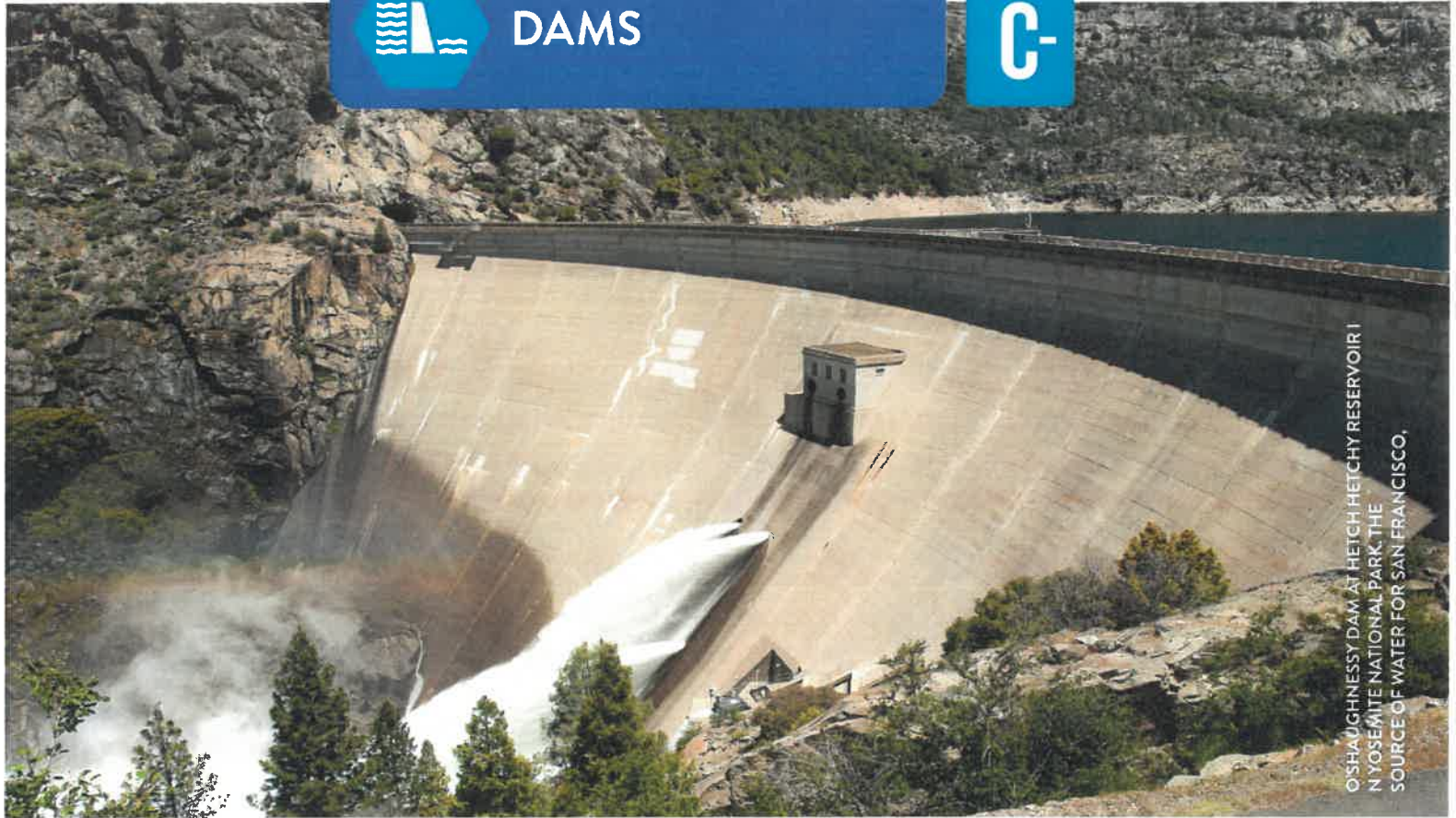
4. INFORM THE PUBLIC AND RAISE AWARENESS

There is a need for additional consumer education on the current funding needs and the negative impacts of further delaying action to fund infrastructure improvements statewide. The education needs to also extend to the local and state legislators, locally elected boards and commissions, as well as to the media.

- **Develop a program for improved communication and messaging** to clearly articulate the need for maintaining sustainable and resilient infrastructure that will have positive impacts to the environment and improve quality of life.
- **Raise awareness with state and local legislators**. One key to addressing our infrastructure needs is to continue building relationships with decision-makers at the local and state levels. State and local legislators make the critical decisions on passing bills that promote funding and improving our infrastructure.
- **Raise awareness with the public**. ASCE's continued efforts will result in a better-informed public, which can more effectively cast votes on state and local ballot measures impacting California's infrastructure.



DAMS



OSHAUGHNESSY DAM AT HETCH HETCHY RESERVOIR IN YOSEMITE NATIONAL PARK. THE SOURCE OF WATER FOR SAN FRANCISCO.

DAMS

EXECUTIVE SUMMARY

Dams are a critical element of California's infrastructure. The public depends on them for 70% of state's water supply, 15% of the power, as well as for flood control, recreation, fisheries and wildlife habitat. Changes in climate and population growth require new operational strategies. Over half of California's 1,476 state, federal and locally owned dams are considered high hazard dams, meaning their failure would result in probable loss of human life and economic damage. Approximately 70% of the dams are greater than 50 years old. Aging dam infrastructure challenges must be met with increased resources to ensure their reliability and safety. Fortunately, funding for dam inspection has increased in recent years. In 2015, the California Division of Safety of Dams (DSOD) budget was approximately \$13 million, up from \$11 million in 2010. This increase kept funding on par with inflation. However, while DSOD's budget is significantly higher per regulated dam than the national average, it does not fully fund the necessary programs to ensure adequate dam safety.

BACKGROUND

In 1929, California established the California DSOD in the aftermath of the St. Francis Dam Failure. DSOD regulates more than 1,250 dams in the state. DSOD's responsibilities include independent annual inspections of each dam, reviewing and approving new dams, dam enlargements, repairs, alterations, and removals to ensure that the dams and their appurtenant structures are designed, constructed and maintained to ensure the safety of the public. DSOD also performs in-depth independent evaluations. The Federal Energy Regulatory Commission co-regulates about 200 hydropower dams with DSOD in the State of California. Some large public agencies have dam safety programs within their organizations, while smaller and individual dam owners generally lack the resources to have in-house expertise. Repairs to dams are often initiated as a result of DSOD and FERC evaluations and processes, and only occasionally would dam owners discover issues on their own.

Dams need regular routine maintenance, inspections, repairs and in-depth evaluations to maintain their reliability and provide for safe operation. In February 2017, historic rainfall led to a major incident at the Oroville Dam. Approximately 180,000 people were evacuated and the emergency spillway was utilized. The Oroville incident highlights the need for increased scrutiny of original construction records, thorough engineering evaluations, and the associated funding for these complex studies and to allow for the resulting required maintenance and repairs for all dams and their appurtenant structures.

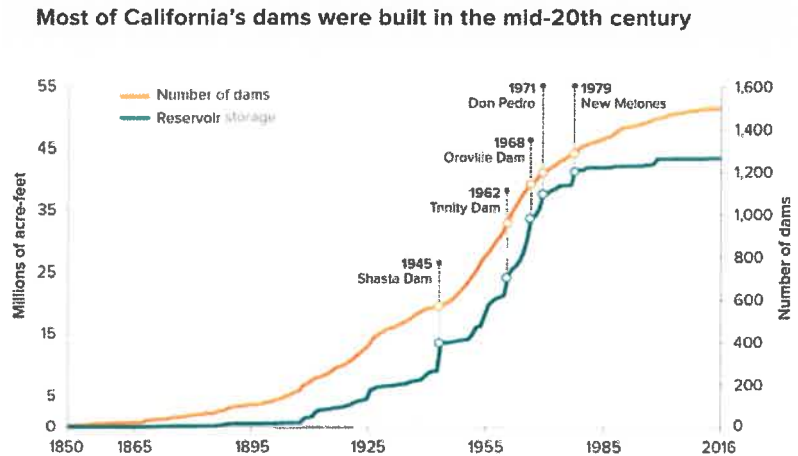
CAPACITY AND CONDITION

Dams provide 70% of California's urban and agricultural water supply and are an important component in providing flood management. Population growth and climate change will create a larger dependence on the existing reservoirs within the State to provide adequate water supply and protect the public from more extreme rainfall events.

Environmental regulations and political challenges have caused dam maintenance projects, even in emergencies, to be lengthy, costly, and difficult. New dam construction is nearly impossible.

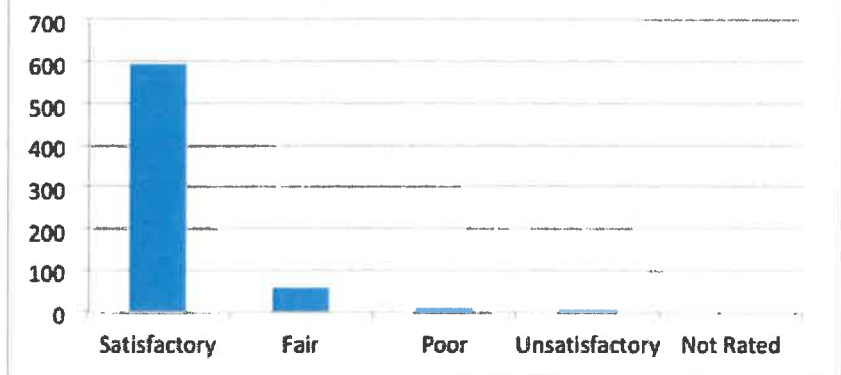
While most dams are built for a 50-year lifespan, the average age of a California dam is 70 years old. As dams age, more thorough inspections and evaluations are needed with corresponding timely remediation. Increased funding for rehabilitation of dams and their appurtenant structures are needed to extend their life and provide protection to the public.

FIGURE 1 - SOURCE: PUBLIC POLICY INSTITUTE OF CALIFORNIA



SOURCES: US Army Corps of Engineers National Inventory of Dams, California Department of Water Resources California Data Exchange Reservoir Information.
 NOTES: Figure does not include 86 dams for which the year of construction is unknown. The five largest dams in the state are listed by name. The number of dams includes main reservoir dams, but also spillways, dikes and other auxiliary dams.

FIGURE 2 - 2018 CONDITION ASSESSMENT RATING OF STATE REGULATED HIGH AND EXTREMELY HIGH HAZARD POTENTIAL DAMS



In September 2017, DSOD released a listing of the condition of dams. More than 30 dams operate with restrictions and may require repairs. However, the timeline for repair and rehabilitation work is lengthy. Although operating restrictions minimize public risk, water supply and their intended function are limited. Of the 105 federally-owned, high hazard dams, three are listed as satisfactory condition, 40 are listed as fair, 40 are listed as poor, and 14 are unsatisfactory, the lowest condition rating.

There are also 251 federally-owned dams in California listed in the 2018 National Inventory of Dams. Of the federally-owned dams, 105 are high hazard, 27 are significant hazard, 61 are low hazard, and 68 are undetermined hazard potential. Of the 105 federally-owned, high hazard dams, three are listed as satisfactory condition, 40 are listed as fair, 40 are listed as poor, and 14 are unsatisfactory, the lowest condition rating.

OPERATION AND MAINTENANCE

Dam operation and maintenance must include frequent and thorough inspections, followed by corrective actions to address deficiencies. Scheduled maintenance, performed regularly, is the surest and cheapest insurance against the costly failure of dams and their components, provided of course that inspections adequately identify problems and that repairs are properly engineered and constructed. The investment in this infrastructure is economically sound when comparing the costs of maintenance to the exponentially greater cost to repair failed dams and the resulting collateral damage.

The proactive search for identifying deficiencies is a vital part of dam stewardship. Dam problems may be hidden or difficult to identify. Therefore, dam owners and regulators must have a sufficient number of qualified engineers to inspect and evaluate dams. Engineers must assess the dam based on the original construction which is sometimes difficult and time consuming and often requires costly explorations and evaluations. Careful consideration should be given to ensure that engineers and dam safety reviewers be trained and well qualified. In addition, any regulatory body, even if internal to an agency, must have appropriate enforcement authority and be functionally independent from any organization that own the dams.

DOSD's budget has increased in recent years. In 2015, available funding was approximately \$13 million, up from \$11 million in 2010. The budget is significantly higher per regulated dam than the national average. In the aftermath of the Oroville Dam incident, additional funding was required to fund DSOD oversight of in-depth evaluations. This funding was paid for by increasing dam owner regulatory fees by approximately 35%. The additional revenue funds new programs to oversee the development of Emergency Action Plans, dam spillway studies, inundation modeling and increased inspection. The sizable regulatory fee increases are a hardship for small dam owners.

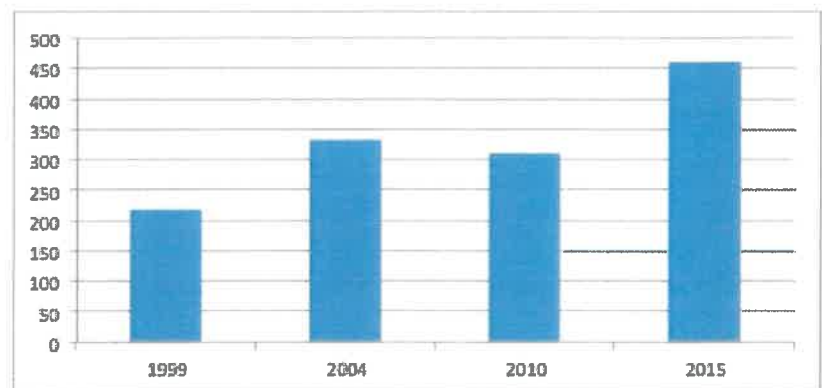
PUBLIC SAFETY

Of the more than 1,250 dams regulated by the DSOD, 681 are considered high hazard. There are also 251 federally-owned dams in California listed in the 2018 National Inventory of Dams. Of the federally-owned dams, 105 are high hazard, 27 are significant hazard, 61 are low hazard, and 68 are undetermined hazard potential. A high hazard dam is a one in which failure or mis-operation is expected to result in loss of life and may also cause significant economic damage.

Emergency Action Plans and inundation maps have been required for many years by statute at Title 2, Government Code, Section 8589. However, this law

has not been enforced. In the aftermath of heavy rainfall and the high-profile Oroville Dam incident in 2017, the state legislature voted to require all high hazard and significant hazard dams under their jurisdiction to develop Emergency Action Plans and update inundation maps for emergency preparedness. The deadline for all high hazard dams to develop these plans was January 1, 2019, but at time of print, new EAP numbers are not available. EAPs improve dam safety by identifying potential emergency conditions at dams and outline a preplanned set of actions to help prevent loss of life and minimize property and environmental damage. In 2018, just 74% of high hazard dams in California had EAPs, lower than the national average of 77% reported in 2017 by the ASCE Infrastructure Report Card.

FIGURE 3 - ASDSO CALIFORNIA DAM SAFETY SUMMARY 2015



FUNDING AND FUTURE NEED

Many dams go unrepaired due to limited available resources by their owners. Few federal funds are specifically reserved for non-federal dams. Congress authorized the High Hazard Potential Dam Rehabilitation program in 2016 but to date has appropriated limited funds. Funding provides a vital source of revenue for state and local dam rehabilitation projects. On occasion, limited state funds have been made available for the repair of dams. State and local funding for publicly-owned dams could be made from a variety of sources, including bonds, water rates, dam safety fees, and general fund monies. In 2014 California voters approved Proposition 1, which included \$2.7 billion for new dams to improve the state's water supply, but there were no funds available for the repair of dams.

Funding is needed to perform scheduled maintenance and repairs of deficiencies found during inspections. O&M funding needs are often significantly more than dam owner budgets will allow. This is especially true for many smaller dam owners. Estimates from the Association of State Dam Safety Officials and dam owners indicate that in excess of \$2.5 billion in funding is needed to repair dams statewide. These estimates do not include the current estimated cost of the Oroville dam repair, which is projected to exceed \$1 billion. Nor does the amount include the \$2.5 billion dollars of Proposition 1 funding, which is being directed to the construction of three new dam projects in the state.

Another challenge facing dam owners are lengthy and costly environmental reviews which can delay necessary repairs. An expedient method of fast-tracking urgent repairs is needed, especially for immediate and urgent life-safety repairs.

RESILIENCE

The California Department of Water Resources reported in April 2018 that the Sierra Nevada snowpack was approximately 50% of its historical average. Comparatively, the year before snowpack was over 160% of its historical average. This phenomenon, "precipitation whiplash," has major implications for the state's population and agricultural production capabilities. Dams are critical to regulating the supply of water and storing excess precipitation for use during dry periods. Sufficient capacity at reservoirs will be extremely important as climate change worsens the rapid transitions between extreme wet and dry spells.

It's also important to acknowledge the risk dams pose should a major earthquake impact the state. Because of this, DSOD has required dam owners to evaluate the seismic safety of their dams. Dams with deficiencies have either been repaired or have operational restrictions to mitigate risks and ensure public safety if earthquake damage were to occur.

INNOVATION

Over the last several decades, innovative technologies have been implemented in dam operations and evaluations. Specialized products are being developed to allow for better and more timely repairs. At major dams, remotely monitored instruments measure and record dam conditions. Major valves and spillway gates can now be remotely operated to allow more instantaneous operations. At some dams, seismographs have been installed to monitor how dams respond to earthquakes, which provide valuable data for the engineering analysis of the dam. Recent advances in technology can also greatly improve dam inspection and repair efforts. Advances in improved inspection technology and imaging such as GPS data, LIDAR, automated survey systems and ground penetrating radar can be used to expose defects on and within dams, spillways and buried pipelines and provide real time data to dam operators. However, the majority of smaller dams do not yet have these technologies.

Because it is difficult to build new dams or increase existing dam capacity, innovative operational methods are needed to address the primary functions of dams: water storage and flood control. Use of modern meteorological forecasting including snow-melt predictions and storm forecasting can help dam owners predict the best times of the year to release water for flood control and store water for maximum water supply. Innovations in this area also hold the potential to increase the percentage of energy produced with no increase in environmental impact.



RECOMMENDATIONS TO RAISE THE GRADE

- Empower the California DSOD by providing additional tools to enforce timely repairs of deficiencies.
- Develop new laws and approaches to expedite environmental reviews associated with the repair of dams. Initiate advanced environmental coordination with Resource Agencies and prepare standby mitigation plans so that regulations do not inhibit necessary repairs. Resource Agencies should balance the environmental impact of repairs against the exponentially greater adverse impact of dam failure.
- Seek regional solutions, interagency cooperation and consider technical advances such as flood forecasting to better coordinate and balance water supply and flood control space.
- Provide training programs to ensure qualified engineering inspections and evaluations are being conducted by well qualified, experienced, and professional engineers. Regulatory agencies should continue to thoroughly review inspection reports and designs, and require independent expert technical review boards, when appropriate.
- Provide research to improve technology for better dam operation strategies, dam safety monitoring and complex evaluations of dams.
- Provide simplified grant funding and low-cost loans for dam owners of high hazard dams for repairs and maintenance; urge Congressional appropriations for the High Hazard Potential Dam Rehabilitation Program, which provides federal grant assistance for the repair, rehabilitation, or removal of non-federally owned high hazard potential dams.
- Ensure dam owners understand their risks and prioritize upgrades based on those risks. Continue to urge dam owners to fund timely maintenance to avoid more costly repairs or remediation of damage. Emphasize inspections and maintenance to extend the useful life of dams.



RECOMMENDATIONS TO RAISE THE GRADE (CONT.)

- **Educate dam owners and those with property around dams about dam basics to avoid unintentional impacts to dam safety (e.g. filling in emergency spillway to increase lakefront.)**
- **Dam owners should provide independent engineering oversight of the state's Critical Infrastructure dams. This work must be performed by qualified engineers, using expert technical review boards for major design projects or studies.**
- **Regulatory agencies such as DSOD or internal dam safety groups at large federal agencies should have appropriate enforcement authority and be functionally independent of their parent organizations that own and operate dams.**

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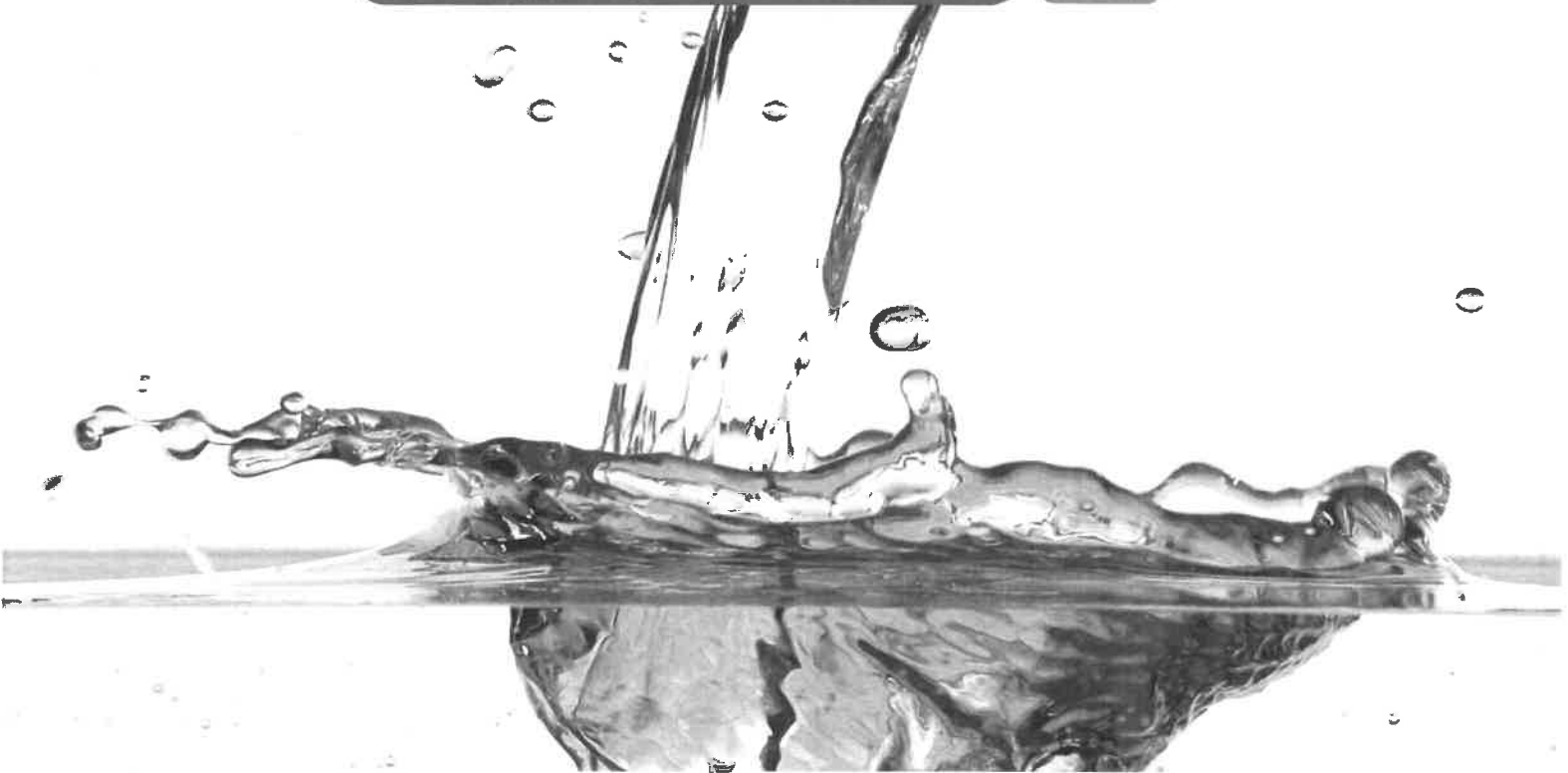
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"The Cost of Rehabilitating Our Nation's Dams: A Methodology, Estimate and Proposed Funding Mechanisms", Association of Dam Safety Officials, December 2002, Updated 2016, 2012, 2009



DRINKING WATER



DRINKING WATER

EXECUTIVE SUMMARY

Providing effective water supply and treatment in California has always been challenging due to great variations in water availability and demand from year to year across the state. Historically, California has adapted to this challenge by building a vast network of water storage and conveyance facilities. Today, much of this network is aging. In San Francisco, approximately 150 of the 1,200 miles of water mains are over 100 years old. The Los Angeles Department of Water and Power reports that approximately 28% of the city's 6,780 mainline pipes were installed before 1938. And while California's urban centers generally have state-of-the-art water treatment facilities, many of the state's rural areas are dependent on wells, many of which are inadequate in dry years. To fund and finance necessary drinking water infrastructure projects, water rates have risen, and voters passed both Proposition 1 and Proposition 68 to finance water quality and supply projects. While the additional revenue is helpful, it does not cover all needs throughout the state.

In 2017 the Environmental Protection Agency reported that a 20-year infrastructure need of \$51 billion exists in California for necessary transmission, distribution, treatment and storage.

To address the challenges identified in this report, several key actions are recommended which closely follow the Governor's 2016 Water Action Plan to achieve statewide goals for reliability, restoration and resilience. This plan recognizes there are no single actions that will fix the problem. Rather it reflects a portfolio approach in which California not only adapts to a "new normal," but achieves economic and environmental resilience and reliability

CAPACITY

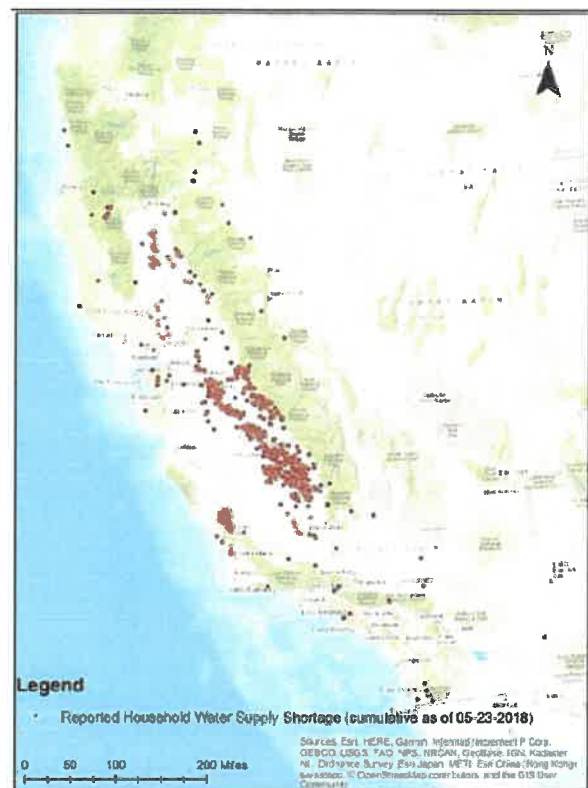
Any discussion about drinking water infrastructure in California must include an acknowledgement about the availability of water, which can vary statewide within a single year and vary widely year to year. For example, in 2016-17, northern California's water infrastructure was strained to capacity handling near-record levels of rain and snow, while, at the same time, supply was limited in southern California due to persistent drought conditions. To thrive in the future, drought and climate change impacts must be addressed to avoid further groundwater depletion and subsidence. The 2014 Sustainable Groundwater Management Act has begun to address the 2 million acre-foot annual shortfall, but more work is needed to ensure a sustainable supply for California's water needs.

CONDITION

California's drinking water infrastructure is aging. In many places, the complex system of filtration plants, pipes, pumps, and more are nearing the end of their useful life. In some places, utilities have raised rates and leveraged bonds and are increasing rates of repair and replacement, but in other areas, more attention is needed.

In San Francisco approximately 150 of the 1,200 miles of drinking water pipes are over 100 years old. Old pipes leak over time due to age, ground movement and other factors. This results in significant loss of treated drinking water. In 2015, the California Legislature passed SB 555, which tasked the State Water Resources Control Board with developing formal water loss standards for urban water agencies, which will go into effect in 2020. However, major water agencies have been conducting water audits, following EPA standards, and have installed advanced leak monitoring, which have helped prioritize main replacements to effectively control water loss. For example, the San Francisco Public Utilities Commission reported in 2018 they were replacing between 12 and 15 miles of pipeline annually, or about 1% each year.

FIGURE 1 - LOCALLY REPORTED HOUSEHOLD WATER SHORTAGES, DWR, CUMULATIVE TO 2018



Across the Bay, the East Bay Municipal Utility District serves 1.3 million customers in 28 cities with more than 4,200 miles of pipeline. Much of the system was built between the 1930s to the 1960s. EBMUD has typically replaced 10 miles per year, in recent years has increased this rate to 15 miles per year, and has plans to ramp up 20 miles or more per year in order to reduce leaks and improve system reliability.

In Southern California, the City of San Diego Public Utilities department operates over 3,000 miles of pipeline. They report that cast-iron mains, which have been in service for almost 100 years, comprise 10% of the system but account for 60 to 80% of water main breaks. While water main breaks are a problem in San Diego, it should be noted that numbers reported by the agency to show the number of breaks has steadily decreased over the past six years, due to approved rate increases supporting necessary repair and replacement projects.

Los Angeles also struggles with aging drinking water pipelines. According to the Los Angeles Department of Water and Power (LADWP) 2017-2018 Water Infrastructure plan, about one-third of the city's 6,780 miles of water pipes were installed before 1938 and will reach the end of their useful life in the next two decades. LADWP is prioritizing the replacement of leaky mainline pipes as well as investing \$6.3 billion in water storage and filtration systems over the next five years.

California's urban centers generally have state-of-the-art water treatment systems. However, many of the state's rural areas are not as well equipped. The San Joaquin region includes 329 of the 3,323 water systems in the state, and most of those systems are dependent on wells, many of which need treatment to mitigate contaminated water. Eighty-three percent of such systems serve less than 1,000 people or 400 service connections, often to disadvantaged communities, and sometimes provide unreliable service due to inadequate infrastructure. More must be done to assist operators of struggling small water systems.

OPERATION AND MAINTENANCE

Cities are beginning to prioritize the repair and replacement of aging water treatment and distribution systems. California water agencies are focusing on advanced asset management to maximize infrastructure service life and reliability. However, the infrastructure in many communities is near the end of its useful life. In Los Angeles, 20% of pipes account for about half of all water main leaks and replacing them is a looming financial problem. The DWP has a \$1.3 billion plan to replace 435 miles of deteriorating pipe from 2015-2025, but difficult questions remain about how the agency will find the money, how much the plan will inconvenience commuters, and whether the utility can ever catch up with its aging infrastructure. To reach its goal by 2025, the DWP will need to more than double its rate of pipeline replacement.

FIGURE 2 - JULY 2015 UCLA MAIN BREAK CLAIMS \$13 MILLION IN FLOOD DAMAGE



FUNDING

Statewide, approximately 84% of water infrastructure funding is from local water rates, with the balance coming from state (13%) and federal sources (3%), which is typical of private and publicly operated drinking water systems nationally. According to a national survey of the 30 largest metropolitan areas in the country, in 2016 the average monthly water bill for a family of four was \$77.25 in San Diego, \$75.00 in San Jose, \$57.79 in Los Angeles, \$41.17 in San Francisco, and \$21.96 in Fresno. Local funding sources are threatened by various laws passed over the years such as Propositions 13, 218, and 26, which have constrained the ability of local agencies to raise revenue for essential programs.

Water rates have been rising in California, in part to help fund drinking water infrastructure repairs and upgrades. However, there is significant historical pressure to maintain low rates. As a result, rate increases have not covered all needs and scarcely begin to address impacts of climate change. The State Water Resources Control Board is drafting a plan to address affordability in an effort to ensure water rate increases, while critical to address deferred maintenance, are not disproportionately impacting disadvantaged communities. Currently, the agency reports that over 50% of water providers do not offer low income customers with rate assistance.

FUTURE NEED

Water needs will grow as the State's population rises to an estimated 44.1 million by 2030. However, reduced demand as a result of agricultural and urban conservation measures and recycled water programs have shown success.

Key components of California's water system include the State Water Project and the federal Central Valley Project, both of which serve to move water from wetter parts of the state to more arid regions. The Sacramento-San Joaquin Delta provides water to both of those systems, but it's jeopardized by aging levees, land subsidence, seismic and flood threats, regulatory restrictions, and sea level rise. To address these problems, lawmakers in Sacramento have proposed the \$17 billion "California WaterFix" program to convey water from upstream of the Delta to pumping plants in the south Delta. Much work remains to bring that project to fruition.

A huge funding need exists to bring drinking water infrastructure throughout California up to 21st century standards. In 2017, the U.S. Environmental Protection Agency (EPA) reported that a 20-year infrastructure need of \$51 billion exists for necessary transmission, distribution, treatment and storage in California.

In recent years, California voters have supported bonds for drinking water infrastructure. In 2014, Proposition 1 provided \$7.5 billion in water bonds, including \$520 million to improve water quality, \$900 million for projects that prevent or clean up contamination of groundwater, and \$725 million for water recycling and advanced water treatment technology projects. Additionally, in June 2018, California voters approved Proposition 68 which authorized \$4 billion in bonds for, among other things, water quality and supply projects. The benefits from these ballot measures have not yet been fully realized as projects are still underway and funding has yet to be distributed.

While bond measures and local initiatives are helpful, they are insufficient to comprehensively address drinking water infrastructure needs in California. Recently passed bonds cover less than half the needed amount identified by the EPA.

PUBLIC SAFETY

Typically, water quality standards in California exceed federal standards. Overall, according to the California State Water Resources Control Board 2016 Annual Compliance report, "water systems in California have a high rate of compliance with [state] drinking water standards. However, more work needs to be done to deal with serious water quality problems and ongoing violations particularly with small local community systems." This statewide concern prompted California, in 2012, to legislatively recognize a human right to water.

RESILIENCE AND INNOVATION

With much of the state facing threats from natural disasters, the demands to retrofit and prepare for hazards is ever present. According to former U.S. Geological Survey seismologist Lucy Jones, water infrastructure is “the single biggest vulnerability we’re facing in Southern California.” Recognizing this threat, seismic retrofits are being made in the most earthquake prone zones along California’s coastal cities. For instance, since 1998, the Metropolitan Water District of Southern California has invested over \$250 million in seismic upgrades of key structures. The San Francisco Public Utilities Commission has invested \$4.8 billion in its Water System Improvement Program, and many agencies statewide have done the same. However, smaller agencies and rural systems lack the necessary financial resources to ensure resilience.

In addition to retrofitting drinking water infrastructure to improve its ability to withstand natural disasters, many agencies across the state are also increasing reliance on local water sources. The scarcity of water across the state has presented an opportunity to drive innovation.

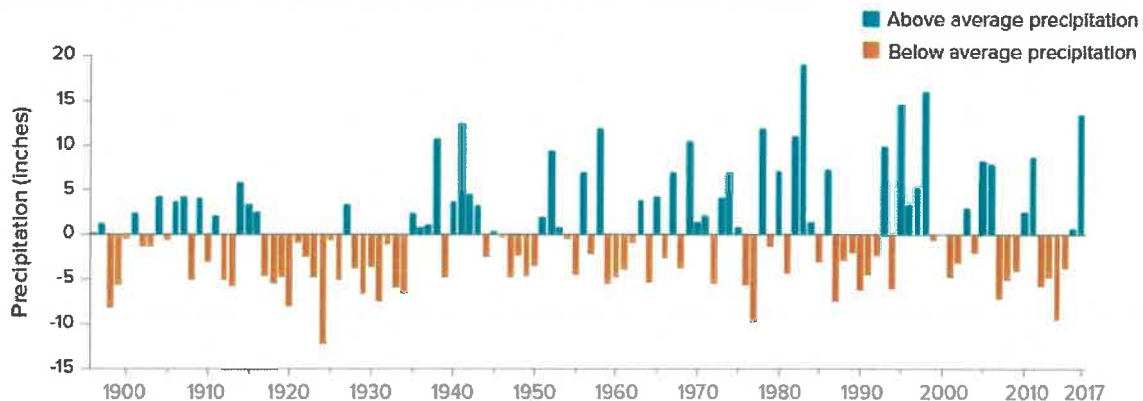
California has taken the lead in developing integrated regional water management plans and projects that reflect the benefits of collaboration and integrated approaches to addressing multiple water resource needs. In southern California, for example, the Metropolitan Water District of Southern California is working toward sourcing 65% of its water from local supplies by 2040, up from 41% in 1990, in an effort to improve system resilience.

The Santa Clara Valley Water District is also a national leader in deploying cutting-edge technology to enable recycled and reclaimed water, with a goal of using it for 10% of the area’s total water supply by the year 2025. Orange County Water District has also taken the lead in using highly treated recycled water through its ASCE Opal Winner Groundwater Replenishment System project to recharge groundwater basins thus reducing dependence on increasingly expensive imported water.

Desalination also holds promise to boost resilience, and even with its high capital and O&M cost, has proven to be cost effective in very arid regions. Groundwater basin desalination plants particularly have been very effective in helping to clean up high saline inland groundwater supplies. For coastal communities, seawater desalination is an option to diversify water portfolios as the San Diego County Water Authority has found with the construction of its 40 billion gallons seawater desalination facility serving drinking water to residents of San Diego County.

FIGURE 3 - CALIFORNIA'S VARIABLE CLIMATE - SOURCE WESTERN REGIONAL CLIMATE CENTER, PUBLIC POLICY INSTITUTE OF CALIFORNIA

CALIFORNIA'S VARIABLE CLIMATE LEADS TO DROUGHTS AND FLOODS



SOURCE: Western Regional Climate Center.

NOTES: Bars show number of inches above or below the long-term California statewide average precipitation (21.43 inches) based on water year (October–September) since 1896. The 2017 bar is based on data through July and author estimates for the remaining two months based on 2016 values.



RECOMMENDATIONS TO RAISE THE GRADE

- **ADDRESS AGING INFRASTRUCTURE NEEDS.** As water rates are usually set by locally elected boards and commissions that generally run on low water rate platforms, there is a need for additional consumer education on the current funding needs and the negative impacts of further delaying action to facilitate fair and appropriate water rates needed to fund infrastructure improvements for all water systems statewide.
- **CONTINUE TO MAKE CONSERVATION A CALIFORNIA WAY OF LIFE.** The Water Conservation Act of 2009 requires a 20% reduction in urban per capita water use by December 31, 2020. Though a great start, more can and must be done. Key areas of future focus include expanded development of sustainable water supplies at the regional level and agricultural water use efficiency.
- **INCREASE REGIONAL SELF RELIANCE AND INTEGRATED WATER MANAGEMENT ACROSS ALL LEVELS OF GOVERNMENT.** The State's Integrated Water Management Planning program is a 21st century approach that supports regionally driven, multi benefit projects that increase regional self reliance and sustainable practices. Funding for the program should be expanded to foster improved alignment between land use and water, provide assistance to disadvantaged communities, and support better use of local water supplies such as recycling, stormwater capture, and desalination.
- **ACHIEVE THE CO EQUAL GOALS FOR THE DELTA.** The co-equal goals of the Delta Stewardship Council are to provide a more reliable water supply for California and to protect, restore and enhance the Delta ecosystem. Implementation must start on the Delta Plan, including California EcoRestore, which will restore more than 30,000 acres of critical Delta habitat.
- **MANAGE AND PREPARE FOR DRY PERIODS.** Temporary shortages caused by extended, severe dry periods will become more frequent with climate change. Effective management of water resources through all hydrologic conditions will reduce impacts of shortages and lessen costs of response actions. Among the necessary steps to secure more reliable water supplies is updating dam and delivery operations to respond to extreme conditions. This will require continued improvement in water forecasting and cooperation among agencies.



RECOMMENDATIONS TO RAISE THE GRADE (CONT.)

- EXPAND WATER STORAGE CAPACITY AND REDUCE RELIANCE ON IMPORTED WATER.** We need to expand our state's water storage capacity, whether surface or groundwater, big or small, to address the effects of drought and climate change. Climate change will bring more frequent drought conditions and could reduce by half our largest natural storage system—the Sierra snowpack—as more precipitation falls as rain rather than snow, and as snow melts earlier and more rapidly. Moreover, we must better manage our groundwater basins to reverse alarming declines in groundwater levels.

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FINANCIAL

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
STATEMENT OF FUND BALANCES

<u>ACCOUNT BALANCES AT MONTH-END</u>	April 30, 2019	April 30, 2018
US BANK ACCOUNTS		
General Fund Account	1,280,400.26	217,364.39
Money Markey Account (DWR/SRF Account)	301,745.40	299,473.27
Money Market Account (DWR/SRF Reserve)	547,336.94	547,336.94
Trust Account (PARS/UAL CalPERS)	676,249.47	600,000.00
<i>Subtotal</i>	<i>2,805,732.07</i>	<i>1,664,174.60</i>
HUMBOLDT COUNTY INVESTMENT ACCOUNTS		
Investment Account	1,392,408.02	1,793,466.39
DWFP Reserve Account	237,004.31	233,368.21
MSRA Reserve Account	433,777.05	427,122.09
SRF Loan Payment Account	95,800.18	94,972.30
ReMat Account	402,798.42	180,634.01
1% Tax Account	490,639.36	393.64
<i>Subtotal</i>	<i>3,052,427.34</i>	<i>2,729,956.64</i>
OTHER ACCOUNTS		
L. A. I. F Account	1,666.80	1,629.83
ReMat Deposit - Mellon Bank	27,000.00	27,000.00
Principle Investment Account	30,523.44	-
Cash on Hand	650.00	650.00
<i>Subtotal</i>	<i>59,840.24</i>	<i>29,279.83</i>
TOTAL CASH	5,917,999.65	4,423,411.07
ENCUMBRANCES AND RESERVES		
Prior-Year Price Factor 2 Rebate	(6,314.81)	(72,414.83)
Prior-Year Restricted AP Encumbrances	-	-
1% Tax Credit to Muni's	(490,639.36)	(393.64)
Advanced Charges - IMG Domestic Reservoir Roof	-	(88,661.37)
Advanced Charges - Bunkhouse	(41,051.00)	(403,365.00)
Advanced Charges - SCADA System Upgrade	-	(83,452.98)
Advanced Charges - Blue Lake/FGCSD River Crossing	-	-
Advanced Charges - Redundant Pipeline	(260,245.00)	-
Advanced Charges - Three Tank Seismic	(255,000.00)	-
DWR Reserve for SRF Loan	(547,336.94)	(547,336.94)
DWR Reserve for SRF Payment	(301,745.40)	(299,473.27)
Pension Trust Reserves	(676,249.47)	(600,000.00)
<i>Subtotal</i>	<i>(2,578,581.98)</i>	<i>(2,095,098.03)</i>
BOARD RESTRICTED		
Paik-Nicely Development	(4,158.00)	(4,158.00)
DWFP Reserves	(237,004.31)	(233,368.21)
MSRA Reserves	(433,777.05)	(427,122.09)
ReMat Deposit	(27,000.00)	(27,000.00)
ReMat Reserves	(402,798.42)	(180,634.01)
UNRESTRICTED RESERVES		
Accumulation for SRF Payment	(95,800.18)	(94,972.30)
Accumulation for Ranney/Techite Payment	29,184.22	29,446.79
Principle Investment Reserves	(30,523.44)	-
General Fund Reserves	(2,137,540.49)	(1,390,505.22)
<i>Subtotal</i>	<i>(3,339,417.67)</i>	<i>(2,328,313.04)</i>
TOTAL NET POSITION	(5,917,999.65)	(4,423,411.07)

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
 MONTHLY EXPENDITURE REPORT - PAGE 1 OF 3
 April 30, 2019

83% Of Budget Year

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

	Month-to-Date	Year-to-Date	Prior Year	Budget	% of Budget
Compensation					
Wages - Regular	160,815.89	1,527,267.26	1,550,492.51		
Wages - Sick	2,565.74	21,865.84			
Wages - Vacation	4,943.79	30,527.60			
<i>Subtotal</i>	168,325.42	1,579,660.70	1,550,492.51	2,086,103.83	76%
Wages - Overtime	416.12	20,004.12	17,294.30		
Wages - Holiday	1,321.20	35,429.26	9,392.56		
<i>Subtotal</i>	1,737.32	55,433.38	26,686.86	30,000.00	185%
Wages - Part-Time	1,782.93	30,228.19	30,480.85	35,312.00	86%
Wages - Shift Diff	819.12	8,781.40	7,721.66	11,000.00	80%
Wages - Standby	7,131.37	66,992.04	65,048.23	81,000.00	83%
Director Compensation	1,680.00	17,760.00	18,080.00	26,000.00	68%
Secretarial Fees	262.50	2,362.50	2,625.00	3,200.00	74%
Payroll Tax Expenses	13,902.31	139,853.53	135,734.40	179,037.00	78%
<i>Subtotal</i>	25,578.23	265,977.66	259,690.14	335,549.00	79%
Employee Benefits					
Health, Life,& LTD Insurance	52,683.70	583,678.48	581,160.39	756,903.00	77%
HSA Expense	5,339.77	40,766.11	32,080.11	26,000.00	157%
Air Medical Insurance	-	1,875.00	-	2,149.00	87%
Retiree Medical Insurance	11,353.02	104,465.23	76,454.53	94,822.00	110%
Employee Dental Insurance	2,829.68	30,150.31	28,888.06	39,398.00	77%
Employee Vision Insurance	649.60	6,785.93	6,376.44	7,354.00	92%
Employee EAP	75.20	827.20	822.50	1,023.00	81%
457b District Contribution	2,700.00	26,200.00	25,500.00	30,600.00	86%
CalPERS Expenses	22,919.58	398,104.41	341,585.35	491,948.00	81%
Workers Comp Insurance	26,107.09	82,665.05	53,435.10	77,928.00	106%
<i>Subtotal</i>	124,657.64	1,275,517.72	1,146,302.48	1,528,125.00	83%
TOTAL S.E.B	320,298.61	3,176,589.46	2,983,171.99	3,979,777.83	80%

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
MONTHLY EXPENDITURE REPORT - PAGE 2 OF 3

April 30, 2019

83% Of Budget Year

SERVICE & SUPPLY EXPENDITURES (S & S)

	Month-to-Date	Year-to-Date	Prior Year	Budget	% of Budget
<i>Operations & Maintenance</i>					
Auto Maintenance	3,713.90	38,066.07	30,638.61	40,000.00	95%
Engineering	3,075.50	41,465.20	56,930.00	75,000.00	55%
Lab Expenses	1,166.69	11,807.23	11,811.84	13,000.00	91%
Maintenance & Repairs					
General	191,924.22	305,066.18	187,865.77	45,000.00	678%
TRF	322.33	29,174.94	46,067.75	13,000.00	224%
<i>Subtotal</i>	<i>192,246.55</i>	<i>334,241.12</i>	<i>233,933.52</i>	<i>58,000.00</i>	<i>576%</i>
Materials & Supplies					
General	1,400.38	26,185.30	-	43,000.00	61%
TRF	6,068.16	27,318.41	-	42,000.00	65%
<i>Subtotal</i>	<i>7,468.54</i>	<i>53,503.71</i>	<i>-</i>	<i>85,000.00</i>	<i>63%</i>
Radio Maintenance	524.28	15,262.56	6,330.78	10,500.00	145%
Ruth Lake License	-	1,500.00	1,500.00	1,500.00	100%
Safety Equip./Training					
General	1,356.29	17,180.72	-	20,000.00	86%
TRF	340.00	1,795.94	-	2,000.00	90%
<i>Subtotal</i>	<i>1,696.29</i>	<i>18,976.66</i>	<i>7,830.78</i>	<i>22,000.00</i>	<i>86%</i>
Tools & Equipment	345.06	3,581.62	-	5,000.00	72%
USGS Meter Station	-	-	-	7,800.00	0%
<i>Operations Subtotal</i>	<i>210,236.81</i>	<i>518,404.17</i>	<i>341,144.75</i>	<i>317,800.00</i>	<i>163%</i>

General & Administration

Accounting Services	4,925.00	15,626.00	16,355.00	25,000.00	63%
Bad Debt Expense	-	358.40	-	-	0
Dues & Subscriptions	887.69	25,843.73	24,232.51	19,000.00	136%
General Manager Training	-	1,506.06	997.08	3,000.00	50%
IT & Software Maintenance	4,545.95	21,473.74	-	29,000.00	74%
Insurance	-	39,911.25	88,698.75	105,000.00	38%
Internet	648.47	8,408.39	-	12,000.00	70%
Legal Services	792.50	34,073.75	49,881.69	28,000.00	122%
Miscellaneous	306.26	10,091.93	10,691.37	11,500.00	88%
Office Building Maintenance	1,377.01	11,200.85	23,048.30	16,500.00	68%
Office Expense	4,621.09	21,491.99	40,825.82	40,000.00	54%
Professional Services	356.50	2,369.94	2,880.43	20,000.00	12%
Property Tax	-	945.00	998.60	1,100.00	86%
Public Info/Education	16.28	16.28	-	-	0

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
 MONTHLY EXPENDITURE REPORT - PAGE 3 OF 3
 April 30, 2019

83% Of Budget Year

SERVICE & SUPPLY EXPENDITURES (con't)					
Regulatory Agency Fees	3,274.42	84,447.17	113,746.90	114,000.00	74%
Ruth Lake Programs	-	-	-	5,000.00	0%
Safety Apparel	-	2,868.74	3,307.08	3,000.00	96%
Technical Training	-	4,947.49	5,713.27	14,500.00	34%
Telephone	4,666.91	44,156.66	49,492.89	41,000.00	108%
Travel & Conference	580.73	5,927.87	7,163.07	22,000.00	27%
<i>Gen. & Admin. Subtotal</i>	<i>26,998.81</i>	<i>335,665.24</i>	<i>438,032.76</i>	<i>509,600.83</i>	<i>66%</i>

Power					
Essex - PG & E	47,236.15	515,077.05	\$491,138.17		
2Mw Generator Fuel	-	8,756.35	\$0.00		
<i>Subtotal Essex Pumping</i>	<i>47,236.15</i>	<i>523,833.40</i>	<i>491,138.17</i>		

All other PG & E	9,281.28	14,326.66	67,077.45	680,814.00	
<i>Subtotal All Power</i>	<i>56,517.43</i>	<i>538,160.06</i>	<i>558,215.62</i>	<i>680,814.00</i>	<i>79%</i>

Total Service and Supplies incl. Power	293,753.05	1,392,229.47	1,337,393.13	1,508,214.83	92%
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PROJECTS, FIXED ASSETS & CONSULTING SERVICES					
	Month-to-Date	Year-to-Date		Budget	% of Budget
	325,053.00	2,885,722.00		8,557,693.00	34%

GRAND TOTAL EXPENSES	939,104.66	7,454,540.93	4,320,565.12	14,045,685.67	53%
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Debt Service - SRF Loan	-	(2,736,684.60)			
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Debt Service - US Bank	-	(389,965.84)			
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TOTAL EXPENSES WITH DEBT SERVICE					
	943,773.46	4,339,805.73	4,320,565.12	14,045,685.67	

OTHER EXPENSES					
ReMat Consultant Expenses	4,668.80	11,915.24	-		

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
 REVENUE REPORT
 April 30, 2019

83% Of Budget Year

A. REVENUE RETURNED TO CUSTOMERS VIA PF2

	MTD RECEIPTS	YTD RECEIPTS	BUDGET	% OF BUDGET	PRIOR YEAR
Humboldt Bay Retail Water Revenue	33,416	390,060	318,394	123%	238,565
General Revenue					
Interest	0	7,596	30,000	25%	25,955
FCSD Contract (Maint. & Operations)	82,763	278,039	225,000	124%	209,026
Power Sales (Net ReMat)	0	58,361	220,000	27%	109,350
Tax Receipts (1% Taxes)	0	50,917	825,000	6%	507,701
Miscellaneous Revenue*	8,554	226,489	50,000	453%	97,707
<i>*Detail on following page</i>					
TOTAL PF2 REVENUE CREDITS	124,733	1,011,462	1,668,394	61%	1,188,305

B. DISTRICT REVENUE

	MTD RECEIPTS	YTD RECEIPTS	BUDGET	% OF BUDGET	PRIOR YEAR
Industrial Water Revenue					
Harbor District	0	1,410	0	0	612
Subtotal Industrial Water Revenue	0	1,410	0	#DIV/0!	612
Municipal Water Revenue					
City of Arcata	107,661	244,303	1,321,044	18%	916,282
City of Blue Lake	15,162	2,324,905	182,807	1272%	129,431
City of Eureka	259,278	372,406	3,119,229	12%	2,172,860
Fieldbrook CSD	14,126	792,321	174,392	454%	119,843
Humboldt CSD	87,800	136,912	1,072,333	13%	716,686
Manila CSD	5,792	785,471	70,168	1119%	43,649
McKinleyville CSD	87,198	87,198	1,066,249	8%	731,112
Subtotal Municipal Water Revenue	577,016	4,743,516	7,006,222	68%	4,829,863
TOTAL INDUSTRIAL & WHOLESALE REVENUE	577,016	4,744,926	7,006,222	68%	4,830,475
Power Sales					
ReMat Revenue, less consultants fees	49,151	164,434	300,000	55%	202,750
TOTAL REMAT REVENUE	49,151	164,434	300,000	55%	202,750
Other Revenue and Grant Reimbursement					
BLFB Pipeline Crossing (FEMA/Prop 84 Grants)	198,993	553,540			
Ouagga Grant (Pass-Through)	551	43,191			
TOTAL OTHER/GRANT REVENUE	199,544	596,731			
GRAND TOTAL ALL REVENUE	950,445	6,517,552	8,974,616	73%	6,221,530

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
 MISCELLANEOUS REVENUE - DETAIL REPORT
 April 30, 2019

B. MISCELLANEOUS RECEIPTS (RETURNED TO CUSTOMERS VIA PF2)

	MTD RECEIPTS	YTD RECEIPTS
Miscellaneous Revenue		
ACWA/JPIA HR LaBounty Safety Award	-	250
ACWA/JPIA Insurance Claim	-	4,261
ACWA/JPIA Retrospective Premium Adj.	-	36,113
ACWA/JPIA Wellness Grant	-	680
Dividend - Principal Life	288	849
Fees - Park Use	25	175
Fees - Right of Way	-	-
FEMA - January 2017 Storm Damage	-	143,065
Insurance - Special Event Liability	-	-
Memorandum of Assistance - MCSD	-	287
Rebate - CALCard	-	2,610
Refund - Diesel Fuel Tax	52	375
Refunds - Miscellaneous	89	277
Reimb - District Hats/Safety Apparel	-	230
Reimb. - Copies	5	138
Reimb. - Gas	-	195
Reimb. - Postage	1	1
Reimb. - Telephone	-	46
Rent - Parking Lot	25	225
Retirees' Health Ins./COBRA Reimb.	7,190	32,084
Sale - Scrap Materials/Metals	-	3,479
Sale - Surplus Equipment	-	100
UB - Bad Debt Recovery	-	97
UB - Hydrant Rental Deposit	-	256
UB - Mainline Connection Charge	-	-
UB - Meter Installations	-	-
UB - Retail Connection Charge	-	-
UB - Water Processing Fees	30	535

Ruth Area

Fees - Buffer Strip ROW License	-	-
Fees - Buffer Strip/PG&E ROW	-	100
Lease - Don Bridge	768	933
Permit - RLCSD-Water System	-	-
Permit - Ruth Area Water Use	-	180
Rent - Ruth Cabin	80	80
Sale - Merchantable Timber	-	219,065
Sale - Surplus Gravel	-	-

TOTAL MISCELLANEOUS REVENUE	8,554	446,684
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HUMBOLDT BAY MUNICIPAL WATER DISTRICT
 PROJECT PROGRESS REPORT
 April 30, 2019

83% Of Budget Year

A. CAPITAL PROJECTS

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Replace Collector 1 - Pump 1.2	0	178,829	214,500	83%
Collector Motors/Parts Inventory	0	83,853	103,500	81%
Collector Pump Oilers	466	1,530	0	0
Generator for Industrial Meter Building Comm. Equip.	0	3,676	4,750	77%
Essex Control Building Flooring Replacement	0	0	6,000	0%
Ruth Hydro Protective Relay Replacement - Phase 2	0	1,904	120,000	2%
Blue Lake/FGCSD River Crossing* <i>(Prop 84 Grant, FEMA Grant, & Adv. Charges)</i>	0	1,201,012	2,515,400	48%
Surge Tower Demolition* <i>(FEMA Grant, Adv. Charges, ReMat Reserve)</i>	1,166	38,454	960,000	4%
12KV -NEPA Process* <i>(FEMA Grant, Adv. Charges, and Current Muni Charges)</i>	5,967	35,550	2,032,050	2%
TOTAL CAPITAL PROJECTS	7,599	1,544,807	5,956,200	26%

B. FIXED ASSET PROJECTS

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Collector 1 Electrical Upgrade	0	33,450	185,500	18%
Essex- Two Admin. Computers	0	4,198	4,725	89%
Essex - Replace Control System Computers	0	1,738	2,500	70%
Essex - Replace Computer Server Cabinet	494	7,431	10,250	73%
Essex - Replace Operations Chairs	0	1,556	1,500	104%
Essex - Ops. Supervisor Ergonomic Desk	1,599	1,599	3,500	46%
Replace Unit 1 - Superintendent	40,463	40,463	50,000	81%
Boom Truck - Load Moment Indicator	0	13,831	14,250	97%
Boom Truck (Unit 5) Air-Ride Seat	0	754	1,500	50%
Portable Gantry System	0	3,227	4,000	81%
Fleet Servicing Equipment	0	1,292	2,500	52%
HEPA Filter Vacuum	0	1,140	1,500	76%
Electrical Testing & Calibration Equipment	0	10,000	11,500	87%
Utility Line Locator	0	6,250	6,250	100%

B. FIXED ASSET PROJECTS (con't)

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Ruth HQ Washroom Remodel	0	0	2,500	0%
Ruth Bunkhouse Furnishings	1,053	1,053	4,000	26%
Hydro Wicket Gate Hydraulic Control Motor	0	2,082	2,500	83%
Ruth Hydro Oil & Paint Storage Lockers	0	0	2,750	0%
Eureka - Replace Two Admin. Computers	0	3,753	6,250	60%
Eureka - ADA Assisted Listening System	0	0	10,000	0%
Accounting and Financial Software	30,116	35,097	60,000	58%
Essex - Replace UPSs - Phase 1*	0	40,320	33,500	120%
<i>(Base Facility and Treatment Facility Project)</i>				
N-Poly Pump Skid Replacement*	0	0	12,250	0%
<i>(Treatment Facility Project)</i>				
Essex - Control & Admin Networks Backup*	0	13,984	15,500	90%
<i>(Treatment Facility Project)</i>				
TOTAL FIXED ASSET PROJECTS	73,725	223,219	448,725	50%

C. MAINTENANCE PROJECTS

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Collector 5 Security/Vandalism Protections	0	0	7,500	0%
Pipeline Maintenance	0	847	12,750	7%
12KV Electric System Maintenance	0	0	4,000	0%
Mainline Meter Flow Calibration	0	64	10,000	1%
Technical Support & Software Updates to Include Control System	0	7,344	19,000	39%
Generator Service	0	1,676	3,500	48%
Hazard & Diseased Tree Removal	0	0	6,500	0%
Cathodic Protection	1,038	1,038	6,500	16%
Maintenance Emergency Repair	511	29,344	50,000	59%
Fleet Paint Repairs	0	745	5,000	15%
Replace Expired Emergency Operations Center Products	0	2,164	2,500	87%
Replace Fleet Emergency Safety Beacons	0	1,678	2,000	84%
Lead Free Brass Inventory	0	0	2,500	0%
Replace 299 Cathodic Anode Well	0	0	172,000	0%
Ruth Lake - Brush Abatement	0	0	6,500	0%
Licensed Timber Operator	0	0	5,000	0%
Log Boom Inspection	0	0	1,000	0%
Ruth Spillway Maintenance	0	27,013	80,000	34%
Ruth HQ - Install Power Pole	0	0	3,750	0%
Ruth HQ & Surrounding Area - Remove Dead/Dying Trees	0	0	20,000	0%

C. MAINTENANCE PROJECTS (cont)

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Hydro - Repair PRV Discharge Pipe	2,392	2,392	5,500	43%
Howell Bunger Valve Inspection	0	0	1,110	0%
2019 Storm Damage	215,184	403,293	0	0
TRF - Generator Service*	0	0	500	0%
<i>(Treatment Facility Project)</i>				
TRF Limitorque Valve Retrofit - Phase 2*	0	10,005	10,250	98%
<i>(Treatment Facility Project)</i>				
TRF Water Quality Instr. Parts Inventory*	0	6,918	7,250	95%
<i>(Treatment Facility Project)</i>				
TRF Water Quality Instruments*	0	5,326	14,750	36%
<i>(Treatment Facility Project)</i>				
TRF Chemical System Back Pressure Valves*	0	9,329	10,500	89%
<i>(Treatment Facility Project)</i>				
TOTAL MAINTENANCE PROJECTS	219,125	509,177	469,860	108%

D. PROFESSIONAL & CONSULTING SERVICES

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Collector 2 Arc Flash Survey and Relay Test	0	0	4,000	0%
Collector 3 Monitoring Well Adndnmnt	0	16,000	26,100	61%
Crane Testing/Certification	0	6,889	7,500	92%
Control/SCADA Software Training	6,663	13,963	27,750	50%
Technical Training	0	1,316	10,500	13%
Backflow Tester Training	0	1,253	3,000	42%
Essex Mad River Cross-Sectional Survey	0	8,452	10,000	85%
Essex Gravel Bar Maintance and Survey	0	0	25,000	0%
Industrial Pipeline Evaluation	0	0	26,000	0%
Industrial and Domestic System Intertie	0	266	11,000	2%
GIS/Facilities Information System	0	0	12,000	0%
GIS/Facilities Information System - Ruth	0	0	4,600	0%
Dune Monitoring Program - Coastal	0	2,000	2,000	100%
Conservancy Climate Ready Grant	0	0	10,000	0%
Eureka - ADA Compliance Consultation	0	0	10,000	0%
Public Education	16	516	5,000	10%
SGMA - Groundwater Management Plan	0	256	5,000	5%
PARS Pension Trust Contribution	0	50,000	50,000	100%
Water Resources Planning	0	0	5,000	0%
Grant Applications	3,508	32,594	30,000	109%
Ruth Spillway Bridge Inspection	0	0	6,500	0%
Ruth Spillway Maintenance Assistance	0	0	15,000	0%

D. PROFESSIONAL & CONSULTING SERVICES (CONT)

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Hydro ReMat Electrical/Maintenance Insp.	0	0	2,050	0%
FERC EAP Tabletop Exercise-Planning	474	757	2,000	38%
FERC Dam Safety Surveillance & Monitoring Report(DSSMR)/FERC Dam Safety Review (Part 12)	493	1,970	3,000	66%
FERC Chief Dam Safety Engineer	2,888	5,956	10,000	60%
Drone Training*	0	260	5,000	5%
<i>(Base Facility and Treatment Facility Project)</i>				
Chlorine System Maintenance*	213	14,657	16,750	88%
<i>(Treatment Facility Project)</i>				
In-Stream Flow*	10,319	80,720	693,408	12%
<i>(Wildlife Conservation Board Grant)</i>				
TOTAL PROF/CONSULTING SERVICES	24,574	237,825	1,028,158	23%

E. INDUSTRIAL SYSTEM PROJECTS

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
Maintain PS6 Water Supply During Low Flow	0	3,891	13,250	29%
Rebuild River Weir at PS6*	0	3,556	75,000	5%
<i>(ReMat Reserves)</i>				
TOTAL INDUSTRIAL SYSTEM PROJECTS	0	7,447	88,250	8%

F. CARRY-OVER PROJECTS FROM PRIOR YEAR

Superintendent Office Remodel	30	581	3,000	19%
Mainline Valve Replacement	0	0	130,000	0%
TRF Video Surveillance System* <i>(Treatment Facility Project)</i>	0	353	30,000	1%
Replace Ruth Bunkhouse* <i>(Advanced Charges)</i>	0	362,314	403,500	90%
CARRYOVER PROJECTS TOTAL	30	363,248	566,500	64%

	MTD EXPENSES	YTD TOTAL	BUDGET	% OF BUDGET
PROJECTS GRAND TOTAL	325,053	2,885,722	8,557,693	34%
Less Projects Funded from Other Sources (Grants/Loans/Advanced Charges/Reserves)	17,452	1,721,605	6,371,345	27%
PF2 Project Total Charged to Customers excluding Debt Service (US Bank)	307,601	1,164,116	2,186,348	53%

Total Project Budget:	8,557,693
Amount Charged to Customers:	2,186,348
Annual Debt Service Charges*:	162,200
Actual Customer Charges:	2,348,548
<i>*Ranney Collector 3 and Techite Pipeline Replacement Projects were partially funded with a 10-year loan. Only the annual debt service for these projects is charged to customers.</i>	

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
101NETLINK			
101NETLINK	04/03/2019	Ruth Data Link/Internet	160.00
Total 101NETLINK:			160.00
ACWA/JPIA			
ACWA/JPIA	04/29/2019	Workers Compensation Program Jan - M	18,836.74
ACWA/JPIA	04/29/2019	Workers Compensation Program Jan - M	1,315.80
ACWA/JPIA	04/19/2019	RETIREE MEDICAL	11,353.02
ACWA/JPIA	04/19/2019	COBRA Dental	164.12
ACWA/JPIA	04/19/2019	COBRA Vision	55.68
Total ACWA/JPIA:			31,725.36
Advanced Security Systems			
Advanced Security Systems	04/03/2019	repair TRF security system	340.00
Advanced Security Systems	04/03/2019	Essex office Quarterly Alarm System Mo	76.50
Advanced Security Systems	04/29/2019	Ruth Hydro Quarterly Alarm System Mo	76.50
Total Advanced Security Systems:			493.00
AirGas NCN			
AirGas NCN	04/29/2019	maintenance supplies	22.39
Total AirGas NCN:			22.39
Arcata Stationers			
Arcata Stationers	04/29/2019	Essex office supplies	112.35
Arcata Stationers	04/29/2019	Essex office supplies	78.46
Arcata Stationers	04/29/2019	Operations Supervisor Ergonomic Desk	1,598.58
Total Arcata Stationers:			1,789.39
Asbury Environmental Services			
Asbury Environmental Services	04/30/2019	dispose of oil waste and antifreeze	80.81
Total Asbury Environmental Services:			80.81
AT & T			
AT & T	04/19/2019	Eureka/Essex Land Line	35.04
AT & T	04/19/2019	Arcata/Essex Land Line	35.04
AT & T	04/19/2019	Samoa/Essex Land Line	235.01
AT & T	04/19/2019	Blue Lake Meter Signal Line	60.52
AT & T	04/19/2019	Eureka Office Modem Line	195.71
AT & T	04/19/2019	Eureka Office Alarm Line	109.91
AT & T	04/19/2019	Samoa Booster Pump Station	110.84
AT & T	04/19/2019	Valve Building Samoa	195.71
AT & T	04/19/2019	Eureka Office	453.91
AT & T	04/19/2019	Essex office	1,183.35
AT & T	04/19/2019	TRF	193.64
AT & T	04/19/2019	Ruth Hydro/Dataline	189.95
Total AT & T:			2,998.63
AT&T Advertising Solutions			
AT&T Advertising Solutions	04/29/2019	white page listing	21.00

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 4/1/2019-4/30/2019Page: 2
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Vendor Name	Date Paid	Description	Amount Paid
Total AT&T Advertising Solutions:			21.00
AT&T Long Distance			
AT&T Long Distance	04/19/2019	Essex Control Long Distance	110.26
AT&T Long Distance	04/19/2019	TRF Long Distance	13.06
AT&T Long Distance	04/19/2019	Essex Office Long Distance	426.66
AT&T Long Distance	04/19/2019	Eureka Office Long Distance	6.63
AT&T Long Distance	04/19/2019	Ruth Hydro/Dataline Long Distance	199.64
AT&T Long Distance	04/19/2019	Essex Office Long Distance	129.03
Total AT&T Long Distance:			885.28
ATS Communications			
ATS Communications	04/29/2019	Configure Control Network Router	125.00
Total ATS Communications:			125.00
Buckles-Smith			
Buckles-Smith	04/29/2019	SCADA/Control Software Training	6,663.00
Total Buckles-Smith:			6,663.00
Bug Press			
Bug Press	04/19/2019	District Decals	16.28
Total Bug Press:			16.28
C.H. Bull Company			
C.H. Bull Company	04/30/2019	replace Ruth Hydro heat exchanger turbi	665.50
Total C.H. Bull Company:			665.50
Caselle, Inc			
Caselle, Inc	04/29/2019	Accounting Software	28,842.00
Caselle, Inc	04/29/2019	Monthly Support and Maintenance	531.00
Caselle, Inc	04/29/2019	Monthly Support and Maintenance	147.42
Caselle, Inc	04/29/2019	Monthly Support and Maintenance	419.58
Caselle, Inc	04/29/2019	Monthly Support and Maintenance	531.00
Caselle, Inc	04/29/2019	Monthly Support and Maintenance	147.42
Caselle, Inc	04/29/2019	Monthly Support and Maintenance	419.58
Total Caselle, Inc:			31,038.00
Chris Harris			
Chris Harris	04/29/2019	Travel Advance - FERC EAP Tabletop E	378.13
Total Chris Harris:			378.13
Citi Cards			
Citi Cards	04/29/2019	Eureka office supplies	9.75
Total Citi Cards:			9.75
City of Eureka			
City of Eureka	04/08/2019	Eureka office water/sewer	73.88
City of Eureka	04/30/2019	Renewal - Alarm Permit	20.00

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Total City of Eureka:			93.88
Coastal Business Systems Inc.			
Coastal Business Systems Inc.	04/19/2019	<i>Eureka office copy and fax machine</i>	940.53
Total Coastal Business Systems Inc.:			940.53
Corey Borghino			
Corey Borghino	04/29/2019	<i>auto mileage reimbursement</i>	58.17
Total Corey Borghino:			58.17
Dale H. Davidsen			
Dale H. Davidsen	04/29/2019	<i>expense reimbursement purchase applian</i>	1,052.92
Total Dale H. Davidsen:			1,052.92
Dave Perkins			
Dave Perkins	04/03/2019	<i>auto mileage reimbursement</i>	204.75
Total Dave Perkins:			204.75
Downey Brand Attorneys LLP			
Downey Brand Attorneys LLP	04/29/2019	<i>Streambed Flow Enhancement Grant</i>	546.00
Total Downey Brand Attorneys LLP:			546.00
Eureka Oxygen			
Eureka Oxygen	04/19/2019	<i>chlorine emergency shutdown system mai</i>	76.84
Eureka Oxygen	04/19/2019	<i>cylinder rental</i>	111.64
Total Eureka Oxygen:			188.48
Fastenal Company			
Fastenal Company	04/30/2019	<i>Fieldbrook-Glendale CSD Morris Subdiv</i>	62.29
Fastenal Company	04/30/2019	<i>Purchase 1000 lb chain hoist</i>	221.38
Total Fastenal Company:			283.67
FEDEX			
FEDEX	04/29/2019	<i>ship DSSMR</i>	70.88
FEDEX	04/29/2019	<i>ship Unit 5 part for warrant repair</i>	11.41
Total FEDEX:			82.29
Fortuna Iron Corporation			
Fortuna Iron Corporation	04/08/2019	<i>maintenance shop supplies</i>	19.40
Total Fortuna Iron Corporation:			19.40
Franklin's Service			
Franklin's Service	04/29/2019	<i>smog certificate surplus vehicle - Unit 1</i>	50.00
Total Franklin's Service:			50.00

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Frontier Communications			
Frontier Communications	04/29/2019	Ruth HQ	53.84
Frontier Communications	04/29/2019	Ruth Hydro/Ruth Dataline	169.24
Total Frontier Communications:			223.08
GEI Consultants, Inc			
GEI Consultants, Inc	04/19/2019	FERC Dam Safety Engineer	2,887.50
Total GEI Consultants, Inc:			2,887.50
GHD			
GHD	04/29/2019	Surge Tower Replacement	1,166.00
GHD	04/29/2019	General Engineering - Ruth	1,266.00
GHD	04/29/2019	General Engineering - Essex	316.50
GHD	04/29/2019	General Engineering - Eureka	633.00
GHD	04/29/2019	Ruth Hydro DSSMR Review	422.00
GHD	04/29/2019	Stream Enhancement Grant	2,643.75
GHD	04/29/2019	12KV Switchgear Replacement -Grant	5,966.50
GHD	04/29/2019	Assistance with Grant Application - Chlo	3,507.75
GHD	04/29/2019	Dam Break Inundation Mapping	860.00
GHD	04/29/2019	Storm Damage - Collector 2 Cable Car	16,324.00
GHD	04/29/2019	Storm Damage - Collector 4 Bank Stabili	8,680.50
GHD	04/29/2019	Cathodic Protection Evaluation	1,038.00
Total GHD:			42,824.00
GR Sundberg, Inc			
GR Sundberg, Inc	04/08/2019	Emergency Collector 4 and 5 Pipeline Pr	187,549.82
Total GR Sundberg, Inc:			187,549.82
Gutierrez Land Surveying			
Gutierrez Land Surveying	04/29/2019	Storm Damage - Collector 2 Road Slip O	2,630.00
Total Gutierrez Land Surveying:			2,630.00
H.T. Harvey & Associates			
H.T. Harvey & Associates	04/19/2019	Assistance with Streambed Flow Enhanc	7,129.25
Total H.T. Harvey & Associates:			7,129.25
Hach Company			
Hach Company	04/29/2019	Lab supplies	180.41
Total Hach Company:			180.41
Harbor Freight Tools			
Harbor Freight Tools	04/30/2019	maintenance supplies	43.39
Harbor Freight Tools	04/30/2019	maintenance supplies	20.66
Harbor Freight Tools	04/30/2019	Magnet Floor Sweeper	37.96
Total Harbor Freight Tools:			102.01
Health Equity Inc			
Health Equity Inc	04/19/2019	District HSA Contributions - 2 employee	160.20
Health Equity Inc	04/19/2019	District HSA Contributions - 5 employee	2,147.12

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Health Equity Inc	04/03/2019	District HSA Contribution	3,000.00
Health Equity Inc	04/08/2019	HSA Admin Fee - 2 employees	5.90
Health Equity Inc	04/08/2019	HSA Admin Fee 9 employees	26.55
Total Health Equity Inc:			5,339.77
Hensel Hardware			
Hensel Hardware	04/08/2019	Meter Service - Fieldbrook-Glendale CS	27.11
Hensel Hardware	04/08/2019	storage of traffic control equipment	17.32
Hensel Hardware	04/30/2019	Fieldbrook-Glendale CSD - Morris Subd	16.16
Hensel Hardware	04/30/2019	maintenance supplies	46.61
Hensel Hardware	04/30/2019	maintenance supplies	39.02
Hensel Hardware	04/30/2019	TRF turbidimeter maintenance	58.54
Total Hensel Hardware:			204.76
Henwood Associates, Inc			
Henwood Associates, Inc	04/08/2019	Consultant Services Agreement	2,334.40
Total Henwood Associates, Inc:			2,334.40
Humboldt County Health Department			
Humboldt County Health Department	04/29/2019	Hazardous Materials Facility Fee	3,274.42
Total Humboldt County Health Department:			3,274.42
Humboldt County Treasurer			
Humboldt County Treasurer	04/08/2019	Fund No 2712 Account 800870	51,146.02
Humboldt County Treasurer	04/30/2019	PF1 Municipalities SRF Payment Fund 3	45,611.43
Total Humboldt County Treasurer:			96,757.45
Humboldt Fasteners			
Humboldt Fasteners	04/30/2019	Collector 3 security upgrades	78.11
Humboldt Fasteners	04/30/2019	Collector 1 motor base sealing	13.45
Humboldt Fasteners	04/30/2019	Maintenance shop loft organization	25.16
Total Humboldt Fasteners:			116.72
Humboldt Redwood Company, LLC			
Humboldt Redwood Company, LLC	04/08/2019	Mt Pierce Lease site	274.28
Total Humboldt Redwood Company, LLC:			274.28
Humboldt Waste Management Authority			
Humboldt Waste Management Authority	04/29/2019	dispose of Essex waste	70.12
Humboldt Waste Management Authority	04/08/2019	Park 4 Bank Stabilization - Dispose of cr	511.09
Total Humboldt Waste Management Authority:			581.21
Hummel Tire & Wheel			
Hummel Tire & Wheel	04/08/2019	Unit 9 tires	968.69
Hummel Tire & Wheel	04/08/2019	Unit 16 tire	163.86
Total Hummel Tire & Wheel:			1,132.55

Vendor Name	Date Paid	Description	Amount Paid
Industrial Electric			
Industrial Electric	04/08/2019	Line Shed 6 Telemetry Repair	37.61
Industrial Electric	04/08/2019	Line Shed 6 Telemetry Repair	150.59
Industrial Electric	04/08/2019	Chlorine System Booster Pump Installati	156.31
Industrial Electric	04/30/2019	Collector 3 security upgrade	122.97
Industrial Electric	04/30/2019	plug adapter for UPS	98.98
Industrial Electric	04/30/2019	Collector 3 security upgrade	82.74
Industrial Electric	04/30/2019	Collector 3 security upgrade	9.37
Industrial Electric	04/30/2019	Collectors Pump Oiler	466.17
Industrial Electric	04/30/2019	Essex Server Cabinet 30 A line	49.49
Total Industrial Electric:			1,174.23
J. Bruce Rupp			
J. Bruce Rupp	04/19/2019	expense reimbursement - ACWA Board	580.73
J. Bruce Rupp	04/19/2019	auto mileage reimbursement - ACWA Bo	335.24
Total J. Bruce Rupp:			915.97
Jerry's Electric Inc			
Jerry's Electric Inc	04/10/2019	Collector 1 Electrical Upgrade	33,450.00
Total Jerry's Electric Inc:			33,450.00
JTN Energy, LLC			
JTN Energy, LLC	04/08/2019	Consultant Services Agreement	2,334.40
Total JTN Energy, LLC:			2,334.40
Lithia Chrysler Jeep Dodge			
Lithia Chrysler Jeep Dodge	04/03/2019	Purchase new Unit 1	39,986.28
Total Lithia Chrysler Jeep Dodge:			39,986.28
Mario Palmero			
Mario Palmero	04/19/2019	Essex office supplies	59.11
Mario Palmero	04/19/2019	Essex Maintenance	58.53
Mario Palmero	04/19/2019	Customer Service Supplies	.98
Mario Palmero	04/19/2019	Customer Service Supplies- Fieldbrook	2.78
Mario Palmero	04/19/2019	lab supplies	6.49
Total Mario Palmero:			127.89
McJunkin Corporation			
McJunkin Corporation	04/08/2019	TRF MX-10 Actuator for FCV531	263.79
Total McJunkin Corporation:			263.79
McMaster-Carr Supply			
McMaster-Carr Supply	04/30/2019	Annual Ruth Hydro maintenance	308.01
McMaster-Carr Supply	04/30/2019	Chlorine System Maintenance	56.69
Total McMaster-Carr Supply:			364.70
Mission Linen			
Mission Linen	04/03/2019	Uniform Rental	87.42
Mission Linen	04/03/2019	Uniform Rental	110.31

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Mission Linen	04/03/2019	<i>maintenance supplies</i>	50.60
Mission Linen	04/03/2019	<i>maintenance supplies</i>	11.50
Mission Linen	04/03/2019	<i>maintenance supplies</i>	23.00
Mission Linen	04/03/2019	<i>Uniform Rental</i>	87.42
Mission Linen	04/03/2019	<i>Uniform Rental</i>	110.31
Total Mission Linen:			480.56
Mitchell, Brisso, Delaney & Vrieze			
Mitchell, Brisso, Delaney & Vrieze	04/08/2019	<i>Legal Services- March 2019</i>	155.00
Total Mitchell, Brisso, Delaney & Vrieze:			155.00
Munnell & Sherrill, Inc.			
Munnell & Sherrill, Inc.	04/29/2019	<i>Fieldbrook-Glendale CSD - Morris Subd</i>	44.46
Total Munnell & Sherrill, Inc.:			44.46
Napa Auto Parts			
Napa Auto Parts	04/08/2019	<i>Durable Equipment Trailer maintenance</i>	72.56
Napa Auto Parts	04/08/2019	<i>Ruth Hydro Standby Generator Maintena</i>	47.89
Napa Auto Parts	04/08/2019	<i>CAT 420 Annual Service</i>	9.27
Napa Auto Parts	04/08/2019	<i>Unit 16 maintenance</i>	48.97
Napa Auto Parts	04/30/2019	<i>equipment maintenance</i>	108.78
Napa Auto Parts	04/30/2019	<i>maintenance shop supplies</i>	111.72
Napa Auto Parts	04/30/2019	<i>Unit 2 service</i>	115.65
Napa Auto Parts	04/30/2019	<i>Vehicle maintenance</i>	21.69
Napa Auto Parts	04/30/2019	<i>Unit 3 maintenance</i>	22.71
Total Napa Auto Parts:			559.24
Network Management Services			
Network Management Services	04/29/2019	<i>Computer Assistance - Eureka office</i>	40.50
Network Management Services	04/29/2019	<i>Essential Care Computer Service for Eur</i>	1,086.19
Total Network Management Services:			1,126.69
Norcal Molecular, Inc.			
Norcal Molecular, Inc.	04/29/2019	<i>repair PRV discharge pipe @ Ruth Hydr</i>	707.72
Total Norcal Molecular, Inc.:			707.72
North Coast Laboratories			
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	100.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	100.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
North Coast Laboratories	04/03/2019	<i>lab tests</i>	70.00
Total North Coast Laboratories:			830.00

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Northern California Safety Consortium			
Northern California Safety Consortium	04/08/2019	monthly membership fee	50.00
Total Northern California Safety Consortium:			50.00
O&M Industries			
O&M Industries	04/19/2019	Eureka office HVAC maintenance	80.00
Total O&M Industries:			80.00
Occupational Health Services of Mad Rive			
Occupational Health Services of Mad Rive	04/10/2019	Annual Hearing and Respirator Exam	175.00
Total Occupational Health Services of Mad Rive:			175.00
Pacific Gas & Electric Co.			
Pacific Gas & Electric Co.	04/19/2019	Ruth Bunkhouse	109.69
Pacific Gas & Electric Co.	04/19/2019	Eureka Office	516.34
Pacific Gas & Electric Co.	04/19/2019	Jackson Ranch Rectifier	15.02
Pacific Gas & Electric Co.	04/19/2019	299 Rectifier	89.54
Pacific Gas & Electric Co.	04/19/2019	West End Road Rectifier	112.20
Pacific Gas & Electric Co.	04/19/2019	TRF	8,005.98
Pacific Gas & Electric Co.	04/19/2019	Ruth Hydro Valve Control	24.89
Pacific Gas & Electric Co.	04/19/2019	Ruth Hydro	93.27
Pacific Gas & Electric Co.	04/19/2019	Samoa Booster Pump Station	288.97
Pacific Gas & Electric Co.	04/19/2019	Samoa Dial Station	25.38
Pacific Gas & Electric Co.	04/19/2019	Essex Pumping 3/1 - 31/2019	47,236.15
Total Pacific Gas & Electric Co.:			56,517.43
Pacific Paper Co.			
Pacific Paper Co.	04/03/2019	Eureka office supplies	104.15
Pacific Paper Co.	04/30/2019	Eureka office supplies	238.61
Total Pacific Paper Co.:			342.76
Pape Material Handling			
Pape Material Handling	04/08/2019	John Deere 410 Backhoe repair	.98
Total Pape Material Handling:			.98
Picky, Picky, Picky, Inc			
Picky, Picky, Picky, Inc	04/29/2019	SCBA Storage	54.23
Total Picky, Picky, Picky, Inc:			54.23
Pierson Building Center			
Pierson Building Center	04/08/2019	chlorine repair kit EOC Building	13.60
Pierson Building Center	04/08/2019	chlorine repair kit "B Kit"	55.13
Pierson Building Center	04/08/2019	Essex Server Room Ceiling panel repair	26.67
Total Pierson Building Center:			95.40
Pitney Bowes			
Pitney Bowes	04/19/2019	refill postage	1,005.00
Pitney Bowes	04/29/2019	postage meter supplies	63.90
Pitney Bowes	04/03/2019	postage meter lease	256.24

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Total Pitney Bowes:			1,325.14
PitStop Cleaning			
PitStop Cleaning	04/29/2019	Eureka office cleaning	160.00
Total PitStop Cleaning:			160.00
Platt Electric Supply			
Platt Electric Supply	04/30/2019	purchase conduit bender	85.72
Platt Electric Supply	04/30/2019	Essex lighting maintenance	563.29
Total Platt Electric Supply:			649.01
Power Industries, Inc			
Power Industries, Inc	04/30/2019	Annual Ruth Maintenance - Hydro Plant	223.50
Total Power Industries, Inc:			223.50
PPG Architectural Coatings			
PPG Architectural Coatings	04/08/2019	maintenance shop supplies	4.44
Total PPG Architectural Coatings:			4.44
R.J. Ricciardi, Inc, CPAs			
R.J. Ricciardi, Inc, CPAs	04/10/2019	Annual Financial Audit FY18/19	5,928.00
Total R.J. Ricciardi, Inc, CPAs:			5,928.00
Rebecca J. Moyle			
Rebecca J. Moyle	04/29/2019	Eureka office petty cash- Employee meeti	54.51
Rebecca J. Moyle	04/29/2019	Eureka office petty cash -Office Supplies	10.74
Rebecca J. Moyle	04/29/2019	Eureka office petty cash - Building Maint	29.70
Rebecca J. Moyle	04/29/2019	Eureka office petty cash - Employee Reco	23.75
Total Rebecca J. Moyle:			118.70
Recology Arcata			
Recology Arcata	04/19/2019	Essex Garbage Service	421.05
Total Recology Arcata:			421.05
Recology Humboldt County			
Recology Humboldt County	04/08/2019	Eureka office garbage/recycling service	90.72
Total Recology Humboldt County:			90.72
Renner Petroleum			
Renner Petroleum	04/29/2019	Sorbent pads	232.28
Renner Petroleum	04/08/2019	cardlock fuel - pumping & control	427.29
Renner Petroleum	04/08/2019	cardlock fuel - water quality	427.29
Renner Petroleum	04/08/2019	cardlock fuel - maintenance	427.29
Renner Petroleum	04/08/2019	cardlock fuel - customer service (Humbol	111.10
Renner Petroleum	04/08/2019	cardlock fuel - customer service (Fieldbr	316.20
Total Renner Petroleum:			1,941.45

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Ruth Lake C.S.D. Ruth Lake C.S.D.	04/29/2019	<i>Quagga Grant expense reimbursement -</i>	550.66
Total Ruth Lake C.S.D.:			550.66
Samantha Ryan Samantha Ryan	04/29/2019	<i>Travel Advance - FERC EAP Tabletop E</i>	96.25
Total Samantha Ryan:			96.25
SCBA Safety Check, Inc SCBA Safety Check, Inc	04/30/2019	<i>SCBA repair</i>	37.49
Total SCBA Safety Check, Inc:			37.49
Sitestar Nationwide Internet Sitestar Nationwide Internet	04/03/2019	<i>Essex Internet</i>	52.90
Total Sitestar Nationwide Internet:			52.90
Six Rivers Communications Six Rivers Communications	04/29/2019	<i>install radio new Unit 1</i>	344.51
Total Six Rivers Communications:			344.51
Staples Staples	04/30/2019	<i>Essex office supplies</i>	93.81
Total Staples:			93.81
Stillwater Sciences Stillwater Sciences	04/10/2019	<i>professional assistance - Channel Contro</i>	316.00
Total Stillwater Sciences:			316.00
Streamline Streamline Streamline	04/30/2019 04/03/2019	<i>Website maintenance membership fee</i> <i>Website maintenance membership fee</i>	450.00 450.00
Total Streamline:			900.00
Sudden Link Sudden Link Sudden Link Sudden Link Sudden Link Sudden Link	04/08/2019 04/08/2019 04/08/2019 04/19/2019 04/30/2019	<i>TRF Internet</i> <i>TRF Internet - Fieldbrook-Glendale CSD</i> <i>TRF Internet - Blue Lake SCADA Monito</i> <i>Eureka office Internet</i> <i>Fieldbrook-Glendale CSD Internet</i>	21.47 42.93 42.93 206.94 276.99
Total Sudden Link:			591.26
SWRCB-DWOCP SWRCB-DWOCP	04/19/2019	<i>D3 Application for Exam - Tim Farrell</i>	100.00
Total SWRCB-DWOCP:			100.00
T.P. Tire Service, Inc T.P. Tire Service, Inc	04/29/2019	<i>spare tire for dump trailer</i>	115.76

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
Report dates: 4/1/2019-4/30/2019Page: 11
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Vendor Name	Date Paid	Description	Amount Paid
T.P. Tire Service, Inc	04/30/2019	Unit 3 flat repair	15.00
Total T.P. Tire Service, Inc:			130.76
Thatcher Company, Inc			
Thatcher Company, Inc	04/10/2019	replenish TRF chemicals	6,068.16
Total Thatcher Company, Inc:			6,068.16
The Mill Yard			
The Mill Yard	04/30/2019	Collector 3 security upgrade	15.08
The Mill Yard	04/30/2019	Essex small equipment storage	322.90
The Mill Yard	04/30/2019	Essex small equipment storage	22.72
The Mill Yard	04/30/2019	Essex small equipment storage	30.03
The Mill Yard	04/30/2019	Essex small equipment storage	5.09
The Mill Yard	04/30/2019	Maintenance shop loft organization	54.22
The Mill Yard	04/30/2019	Maintenance shop loft organization	318.37
The Mill Yard	04/30/2019	Maintenance shop loft organization	3.79-
The Mill Yard	04/30/2019	Maintenance shop loft organization	19.46
The Mill Yard	04/30/2019	Maintenance supplies	42.82
The Mill Yard	04/30/2019	Maintenance shop loft organization	6.49-
The Mill Yard	04/30/2019	Maintenance shop loft organization	-197.50
Total The Mill Yard:			1,017.91
Thomas Law Group			
Thomas Law Group	04/29/2019	Legal Fees - March	637.50
Total Thomas Law Group:			637.50
Thrifty Supply			
Thrifty Supply	04/03/2019	Plumbing supplies	108.13
Thrifty Supply	04/30/2019	Chlorine Response kit	30.38
Thrifty Supply	04/30/2019	Tools for Unit 1	132.39
Thrifty Supply	04/30/2019	Ruth Hydro PRV discharge piping repair	1,684.09
Thrifty Supply	04/30/2019	Ruth Hydro Annual Maintenance	246.34
Total Thrifty Supply:			2,201.33
Times Printing			
Times Printing	04/08/2019	HBMWD Envelopes	204.52
Total Times Printing:			204.52
Transene Company			
Transene Company	04/29/2019	lab supplies	156.38
Total Transene Company:			156.38
Trinity County General Services			
Trinity County General Services	04/29/2019	Pickett Peak site lease	250.00
Total Trinity County General Services:			250.00
Trinity County Solid Waste			
Trinity County Solid Waste	04/19/2019	Ruth HQ dump fees	6.20
Trinity County Solid Waste	04/19/2019	Ruth Hydro dump fees	6.20

Humboldt Bay Municipal Water District

--Monthly Expenses by Vendor Detail Report--
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Vendor Name	Date Paid	Description	Amount Paid
Total Trinity County Solid Waste:			12.40
U.S. Bank Corporate Payment System			
U.S. Bank Corporate Payment System	04/08/2019	Conference Call - Streambed Flow Enha	16.42
U.S. Bank Corporate Payment System	04/08/2019	Essex Lab supplies	149.79
U.S. Bank Corporate Payment System	04/08/2019	Batteries for Game Camera	15.06
U.S. Bank Corporate Payment System	04/08/2019	Lodging for Ruth Area Rep Coverage	84.00
U.S. Bank Corporate Payment System	04/08/2019	Lodging for Ruth Hydro Operator Cover	84.00
U.S. Bank Corporate Payment System	04/08/2019	Position Advertisement - Ops & Maint Te	15.00
U.S. Bank Corporate Payment System	04/08/2019	Position Advertisement - Ops & Maint Te	15.00
U.S. Bank Corporate Payment System	04/08/2019	Position Advertisement - Ops & Maint Te	15.00
U.S. Bank Corporate Payment System	04/08/2019	Office Wise Purchase Order Software	39.95
U.S. Bank Corporate Payment System	04/08/2019	Eureka Office Supplies	137.68
U.S. Bank Corporate Payment System	04/08/2019	Financial Software Upgrade	911.38
U.S. Bank Corporate Payment System	04/08/2019	SCBA Repairs	448.95
U.S. Bank Corporate Payment System	04/08/2019	Superintendent Office Remodel	30.33
U.S. Bank Corporate Payment System	04/08/2019	Park Restroom maintenance	44.96
U.S. Bank Corporate Payment System	04/08/2019	Replace Essex Server Cabinet	494.00
U.S. Bank Corporate Payment System	04/08/2019	Speedair Compressor Upgrade	55.47
U.S. Bank Corporate Payment System	04/08/2019	position advertisement - Ops & Maint Te	15.00
Total U.S. Bank Corporate Payment System:			2,571.99
Underground Service Alert			
Underground Service Alert	04/29/2019	Regulatory Costs California Undergroun	230.80
Underground Service Alert	04/29/2019	Regulatory Costs for California Undergr	656.89
Total Underground Service Alert:			887.69
Verizon Wireless			
Verizon Wireless	04/10/2019	General Manager	37.30
Verizon Wireless	04/10/2019	Customer Service-Humboldt Bay	14.09
Verizon Wireless	04/10/2019	Customer Service - Fieldbrook-Glendale	40.11
Verizon Wireless	04/10/2019	Operations 2	.87
Verizon Wireless	04/10/2019	Electrician	.18
Verizon Wireless	04/10/2019	Unit 6 - Ruth Area	54.20
Verizon Wireless	04/10/2019	Unit 6 - Ruth Hydro	54.21
Verizon Wireless	04/10/2019	Operations 1	.18
Verizon Wireless	04/10/2019	Customer Service - Ipad	362.59
Verizon Wireless	04/10/2019	Customer Service Ipad-Humboldt Bay	11.80
Verizon Wireless	04/10/2019	Customer Service Ipad - Fieldbrook-Gle	33.58
Total Verizon Wireless:			609.11
Wes Green Landscaping			
Wes Green Landscaping	04/03/2019	green waste disposal - Essex	11.00
Total Wes Green Landscaping:			11.00
Grand Totals:			602,673.61

Humboldt Bay Municipal Water District

--Monthly Overtime Report--
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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
Elec & Ins Tech	.50	\$28	.00	\$0
Maint Worker	.75	\$19	.00	\$0
Oper & Mnt Tech	1.50	\$77	.00	\$0
Total ESSEX:	2.75	\$124	.00	\$0
Hydro Oper Ruth	1.00	\$59	.00	\$0
Total RUTH:	1.00	\$59	.00	\$0
Grand Totals:	3.75	\$183	.00	\$0

To: Board of Directors

From: Chris Harris

Date: May 16, 2019

Re: FY2019/20 Budget Introduction and Discussion

Review

On an annual basis, staff presents the proposed budget for the upcoming fiscal year to the Board for review, discussion, and consideration. The three components of the Districts’ annual budget listed in order of financial impact are:

- | | | |
|--|---------------|--|
| 1. Special Projects Budget | (+/- \$8.7 M) | Review/Discussion May 30 th |
| 2. Salaries & Employee Benefits Budget | (+/- \$4.0 M) | Initial review May 16 th |
| 3. Service and Supply Budget | (+/- \$1.5 M) | Initial review May 16 th |

For the May 16th review and discussion of both the *Salaries & Employee Benefits Budget* and *Service & Supply Budget*, staff has separated key areas and assembled additional information on important topics within this staff report to supplement the presentation to be provided during the meeting.

Overview of Service & Supply Budget

- Total proposed change is an increase of \$43,400 or 2.9%
- Greatest influencer – Regulatory Fees – Increase of \$25,000 or 21.9%

No budget adjustments proposed for the following accounts:

Accounting Services	Auto Operations & Maintenance
General Engineering	GM Training
Insurance	Internet
IT & Software Maintenance	Laboratory Services
Legal Services	Miscellaneous Expenses
Professional Services	Property Tax
Radio Communication System Maint.	Ruth Lake License
Ruth Lake Programs	Safety Apparel Allowance
Safety Equipment & Training – TRF	Technical Training & Development

Service & Supply Budget – Realigned Budgets	
Maintenance & Repairs – General	\$13,000
Materials & Supplies – General	<\$13,000>
Tools & Equipment	<\$2,000>
Safety Equipment & Training – General	\$2,000
Maintenance & Repairs – TRF	\$2,000
Materials & Supplies – TRF	<\$2,000>
Office Maintenance	<\$500>
Office Expense	\$500
TOTAL IMPACT FY19/20 BUDGET	\$0

Service & Supply Budget - Increased Budgets	
USGS Stations	\$400
Travel/Conference	\$3,000
Dues/Subscriptions	\$7,000
Telephone Expense	\$8,000
Regulatory Agency Fees	\$25,000
TOTAL IMPACT FY19/20 BUDGET	\$43,400

Details and explanation for these proposed Service & Supply Budget changes will be provided during the Board Meeting.

Overview of Salaries & Employee Benefit Budget

- Total proposed changes result in an increase of \$146,700 or 4.2%
 - Proposed changes in Salary & Wage Expenses = \$112,500
 - Includes new request for additional Part-Time help
 - Includes new request for COLA
 - *Required* changes in Employee Benefit Expenses = \$34,200
 - Includes required rate increases CalPERS and Health Insurance
 - Includes reduction in CalPERS Unfunded Liability Payment

Salary and Wage Expense	Change FY19/20
NEW REQUEST – Additional Part-Time Staffing	\$21,600
Misc. Step Increases, Other Longevity Increases	\$24,500
35yr. Longevity Increase (Approved FY18)	\$8,800
NEW REQUEST – COLA (2.7% used in calculation, additional options provided in presentation)	\$57,300
TOTAL IMPACT FY19/20 BUDGET	\$112,200

NEW REQUEST – COLA

To assist with the Cost of Living Allowance discussion, staff is providing copies of the following charts, which are also included with the PowerPoint presentation. This is intended as a preview only, additional materials and information will be provided during the meeting.

- **CPI Rates January 2019:**

Consumer Price Index Overview		
	FY18/19	FY19/20
U. S. City Average	2.1%	1.9%
West Region	3.1%	2.7%
West Region Size Class B/C	2.8%	2.5%
San Francisco/Oakland/San Jose	3.6%	3.5%

- **What other agencies/municipalities are doing:**

Cost of Living Increases		
	FY18/19	FY19/20
M.C.S.D.	2.75%	3.45%
H.C.S.D.	2.80%	3.30%
City of Arcata	2.0%	Contract Negotiations
City of Eureka	1.0% (01/2018)	1% (01/2019)

- o The financial impact of various rates:

Potential COLA Rates	Potential Impact
2.0% COLA	\$42,490
2.5% COLA	\$53,113
2.7% COLA	\$57,361
3.0% COLA	\$63,735
3.3% COLA	\$70,108
3.45% COLA	\$73,295

Overview of Employee Benefits Budget

Many of the impacts in the Employee Benefits Budget are not within control of the District. Increases in medical insurance premiums are the biggest contributor to the increased Employee Benefit budget requirements this year.

Employee Benefit & Payroll Tax Expense	Change FY19/20
Payroll Tax Expense	\$10,200
Worker's Comp. Insurance	\$5,000
Medical Insurance Premiums Increase (est. 3%-8%)	\$24,000
CalPERS (Includes current rate increase and UAL)	<\$5,000>
TOTAL IMPACT FY19/20 BUDGET	\$34,200

Staff Recommendations

Staff requests feedback and guidance regarding the remaining budget items (to be reviewed in further detail during the meeting).

Humboldt Bay Municipal Water District

To: Board of Directors

Date: May 16, 2019

From: Chris Harris

RE: Investment Policy

Investment Policy

State law requires that the Board consider and confirm the District's Investment Policy each year. The Board approved this revised Investment Policy (copy attached) in February 2018 based on the addition of the PARS Pension Stabilization Trust in January 2018. The original Investment Policy was adopted in 2004 and the Board has re-adopted a version of the original each year thereafter.

Attached is the current Investment Policy for your consideration and approval. The Investment Policy establishes three investment objectives for funds the District does not need for immediate use. These objectives are:

1. First, to preserve the Safety of Principal;
2. Second, to maintain Liquidity enabling the District to meet all operation requirements; and,
3. Third, to achieve a reasonable Rate of Return consistent with current economic cycles, risk limitations and the investment objectives noted above.

In addition, the Policy specifies three different investment options the District may utilize. These include the County Treasury, the State Local Agency Investment Fund (LAIF), and an irrevocable, tax-exempt IRC Section 115 Trust designated for CalPERS Pension Stabilization.

Staff recommends that the Board re-adopt the attached Statement of Investment Policy for 2019.

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

Statement of Investment Policy

SECTION J2C, PAGE NO. 2

The Secretary/Treasurer of the Humboldt Bay Municipal Water District hereby submits the following statements of the investment policy of the District.

I) Introduction

The authority governing investments for municipal governments is set forth in California Government Code, Sections 53601 through 53686, as amended through January 1, 2016.

The purpose of this policy is to establish investment guidelines for the District consistent with the Government Code and with prudent investment practices.

II) Investment Objectives

District funds, not required for immediate use, shall be prudently invested. In order of priority, the District's investment objectives are as follows:

- a) Safety of Principal – The preservation of principal is the primary objective. Investment transactions shall seek to ensure that capital losses are minimized.
- b) Liquidity – As a second objective, the investment funds should remain sufficiently flexible and available to enable the District to meet all operating requirements.
- c) Rate of Return – The third objective is to achieve a reasonable rate of return consistent with current economic cycles, risk limitations and the investment objectives above.

III) Investment Funds

The Humboldt Bay Municipal Water District has elected to utilize investment opportunities provided by California Government Code Sections 16429.1 and 53684, and Internal Revenue Code Section 115.

The District shall first invest all excess funds not required for immediate use with the Treasurer of the County of Humboldt or the State of California Local Agency Investment Fund.

The District reserves the option to designate and invest funds into an irrevocable, tax-exempt IRC Section 115 Trust. These funds shall be for the purpose of pre-funding the CalPERS Unfunded Pension Liability, and shall be managed by Public Agencies Retirement Services (PARS).

The terms and conditions of such investment options are set forth in District Resolution Numbers: 434, 435, and 2018-02 and hereby incorporated herein (attached hereto as reference).

Approved by Board of Directors: March 16, 2019

Sheri Woo, President
Humboldt Bay Municipal Water District

To: Board of Directors
From: Chris Harris
Date: May 16, 2019
Re: Audit for the year ended June 30, 2018

Discussion

After the local firm Hunter, Hunter, and Hunt ceased auditing the District, a Request for Proposals (RFP) for audit services was issued in early 2016. After reviewing the responses, the Directors selected R. J. Ricciardi, Inc. CPA Firm for a three-year professional services agreement (June 9th, 2016 Board Meeting). The recently completed FY18 Financial Audit represented the third and final year of this three-year agreement.

Government Code section 12410.6.(b) states that commencing with the 2013-14 fiscal year, a local agency shall not employ a public accounting firm to provide audit services to a local agency if the lead audit partner or coordinating audit partner having primary responsibility for the audit, or the audit partner responsible for reviewing the audit, has performed audit services for that local agency for six consecutive fiscal years. For purposes of calculating the six consecutive fiscal years, the local agency shall not take into account any time that a public accounting firm was employed by that local agency prior to the 2013-14 fiscal year. The Controller may waive this requirement if he or she finds that another eligible public accounting firm is not available to perform the audit.

Based on Board direction during the April 16, 2019 Board Meeting, staff requested a Fee Proposal from R. J. Ricciardi, Inc. for an additional three years of audit services.

Recommendation

Staff recommends accepting the proposed fee schedule from R. J. Ricciardi, Inc. for an additional three years of audit services.

Attached

Proposed Fee Schedule for FY2019-21 Financial Audits

May 1 , 2019

Audit Committee
Humboldt Bay Municipal Water District
P.O. Box 95
Eureka, CA 95502-0095

Dear Audit Committee:

We understand the importance of price in the decision you are now making, and have based our fee on our best estimates of time and out-of-pocket expenses.

Our estimate assumes that Humboldt Bay Municipal Water District's personnel will provide us with all information we request in our Client Participation List, in the format requested, and send it to us 30 days prior to scheduling the audit field work. If you have insufficient personnel or time to prepare these items, we can assist you in this area and we will discuss with you the additional time required and estimated fee for these services.

We believe that our proposal fee is both reasonable and fair. We are prepared to discuss it further with you should you have any concern in this area.

Sincerely,



R. J. Ricciardi, Inc.
Certified Public Accountants

ATTACHMENTS:

- ATTACHMENT A: PROFESSIONAL FEES AND EXPENSES FOR THREE YEARS ENDING JUNE 30, 2019, 2020 AND 2021
- ATTACHMENT B: OUR HOURLY RATES AND MAXIMUM FEE TO PERFORM THIS ENGAGEMENT

ATTACHMENT A

**Fees and Expenses for Three Years
Ending June 30, 2019, 2020 and 2021**

District Audit

	<i>Estimated Hours</i>	<i>Hourly Rates</i>	<i>Estimated Amount</i>
Audit Director	40.0	\$180	\$ 7,200.00
Senior Staff	10.0	130	1,300.00
Staff	42.0	75	3,150.00
Admin	5.0	60	300.00
SUBTOTAL:	97.0		\$11,950.00
Travel and Printing Costs			850.00
TOTAL FEE, JUNE 30, 2019:			\$12,800.00
TOTAL FEE, JUNE 30, 2020:			\$12,800.00
TOTAL FEE, JUNE 30, 2021:			\$12,800.00

State Controller's Report

	<i>Estimated Hours</i>	<i>Hourly Rates</i>	<i>Estimated Amount</i>
Audit Director	0.5	\$180	\$ 90.00
Staff	10.0	75	750.00
Admin	1.0	60	60.00
SUBTOTAL:	11.5		\$ 900.00
Travel and Printing Costs			0
TOTAL FEE, JUNE 30, 2019:			\$ 900.00
TOTAL FEE, JUNE 30, 2020:			\$ 900.00
TOTAL FEE, JUNE 30, 2021:			\$ 900.00

FEES AND EXPENSES
 (continued)

Single Audit *(one major program, if required)*

	<u>Estimated Hours</u>	<u>Hourly Rates</u>	<u>Estimated Amount</u>
Audit Director	14.00	\$180	\$ 2,520.00
Senior Staff	5.75	130	747.50
Staff	7.50	75	562.50
Admin	2.75	60	165.00
SUBTOTAL:	30.00		<u>\$ 3,995.00</u>
TOTAL FEE, JUNE 30, 2019:			<u>\$ 3,995.00</u>
TOTAL FEE, JUNE 30, 2020:			<u>\$ 3,995.00</u>
TOTAL FEE, JUNE 30, 2021:			<u>\$ 3,995.00</u>

TOTALS (One Year) Hours: **138.50** **\$17,695.00**

TOTAL *(by Audit Staff)*

	<u>Estimated Hours</u>	<u>Hourly Rates</u>	<u>Estimated Amount</u>
Audit Director	54.50	\$180	\$ 9,810.00
Senior Staff	15.75	130	2,047.50
Staff	59.50	75	4,462.50
Admin	8.75	60	525.00
SUBTOTAL:	138.50		<u>\$16,845.00</u>
Travel and Printing Costs			<u>850.00</u>
TOTAL FEE, JUNE 30, 2019:			<u>\$17,695.00</u>
TOTAL FEE, JUNE 30, 2020:			<u>\$17,695.00</u>
TOTAL FEE, JUNE 30, 2021:			<u>\$17,695.00</u>

ATTACHMENT B

**Our Hourly Rates and Maximum
Fee to Perform this Engagement**

The maximum fees assume reasonable access to R.J. Ricciardi professional staff at no additional cost throughout the fiscal year. The fees contemplate that the books will be closed and ready for audit, that substantially all adjusting entries will be made by the Humboldt Bay Municipal Water District staff prior to the start of final fieldwork, which the Humboldt Bay Municipal Water District staff will provide supporting schedules and reconciliations for all significant asset and liability balances.

If additional time is needed for us to assist the Humboldt Bay Municipal Water District in the resolution or investigation of accounting errors, discrepancies, or reconciliation issues, assistance in the preparation of year end schedules, to research accounting questions unrelated to the audit, or to reflect in our work papers entries made after the start of the audit, we will perform such additional work at our standard hourly rates indicated below.

Standard Hourly Billing Rates			
POSITION	2018/19	2019/20	2020/21
Partner/Director	\$180	\$180	\$180
Manager	\$130	\$130	\$130
Senior Accountant	\$115	\$115	\$115
Staff Accountant	\$75	\$75	\$75
Clerical	\$60	\$60	\$60

OPERATIONS

Memo to: HBMWD Board of Directors
From: Dale Davidsen, Superintendent
Date: May 1, 2019
Subject: Essex/Ruth April 2019 Operational Report

Upper Mad River, Ruth Lake, and Hydro Plant

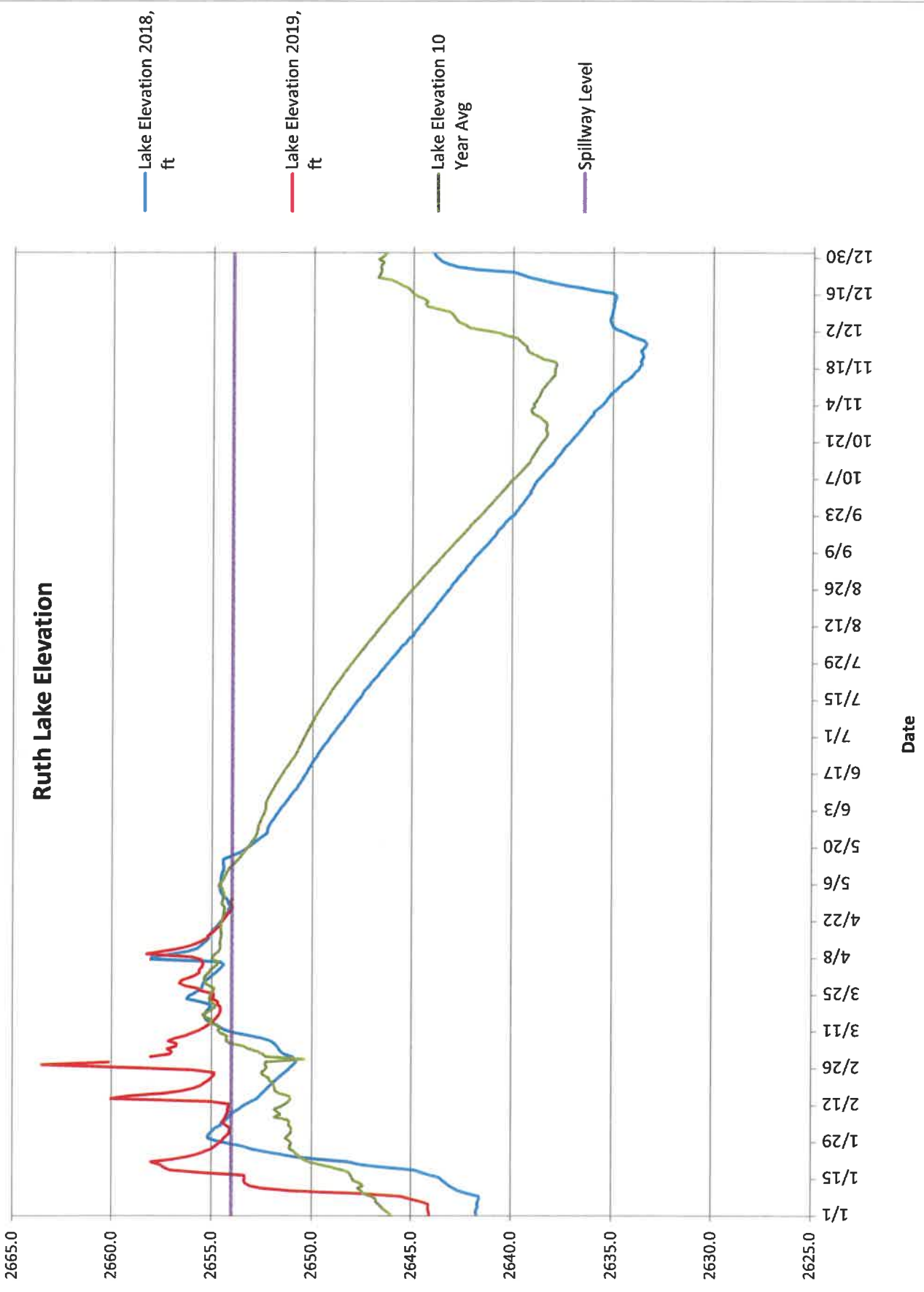
1. The flow at Mad River above Ruth Reservoir (Zenia Bridge) averaged 604cfs. The low flow of 263cfs on April 30 and the high flow of 2279cfs on April 9th.
2. The conditions at Ruth Lake for the month of April were as follows:
 - a. The lake level on April 30th was 2654.03 feet which is:
 1. 0.11 feet lower than March 31st, 2019
 2. 0.23 feet higher than April 30th, 2018
 3. 0.39 feet lower than the ten year average
 4. 0.03 feet above the spillway
3. There was 6.65 inches of recorded rainfall for April at Ruth Headquarters.
4. Ruth Hydro produced 919,875 KWh in April. The hydro plant ran all month with no shutdowns.
5. In April the discharge from the lake averaged 750cfs with a high of 3,211 cfs on the 9th.

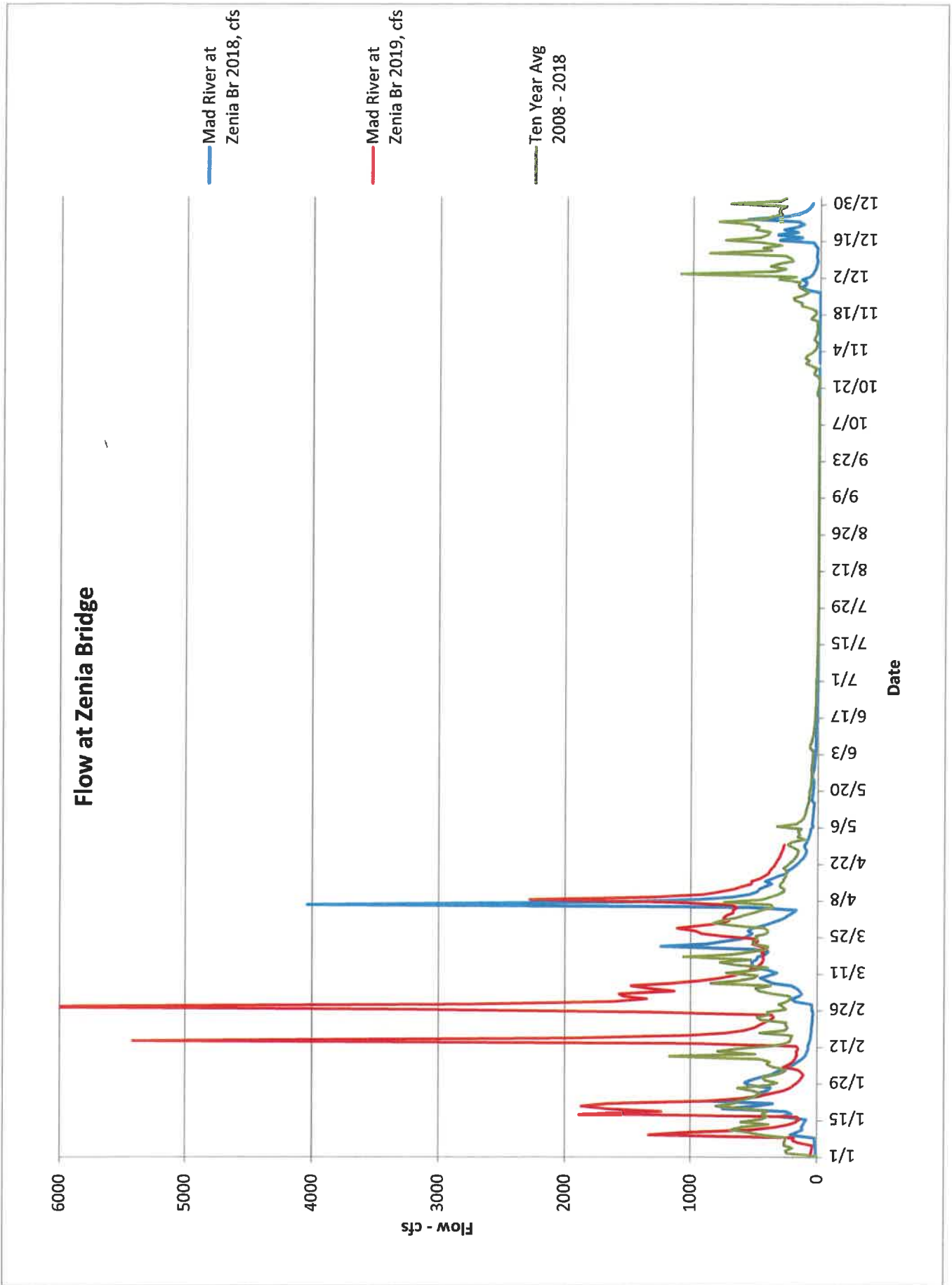
Lower Mad River, Winzler Control, and TRF

6. The river at Winzler Control Center for April had an average flow of 2,378cfs. The river flow reached a high flow of 12,400 cfs on April 9th.
7. The domestic water conditions were as follows:
 - a. The monthly turbidity average was 0.07 NTU, which meets Public Health Secondary Standards.
 - b. For the month of April, we pumped 214.634 million gallons at an average of 8.360 MGD.
 - c. The maximum metered daily municipal customer use was 8.360 MGD on April 30th.
8. The Turbidity Reduction Facility ran 30 days in April. The conditions were as follows:
 - a. Average monthly source water turbidity was 1.47 NTU.
 - b. Average monthly filtered water turbidity was 0.07 NTU.
 - c. We did 56 backwashes on the TRF filters in the month of April.

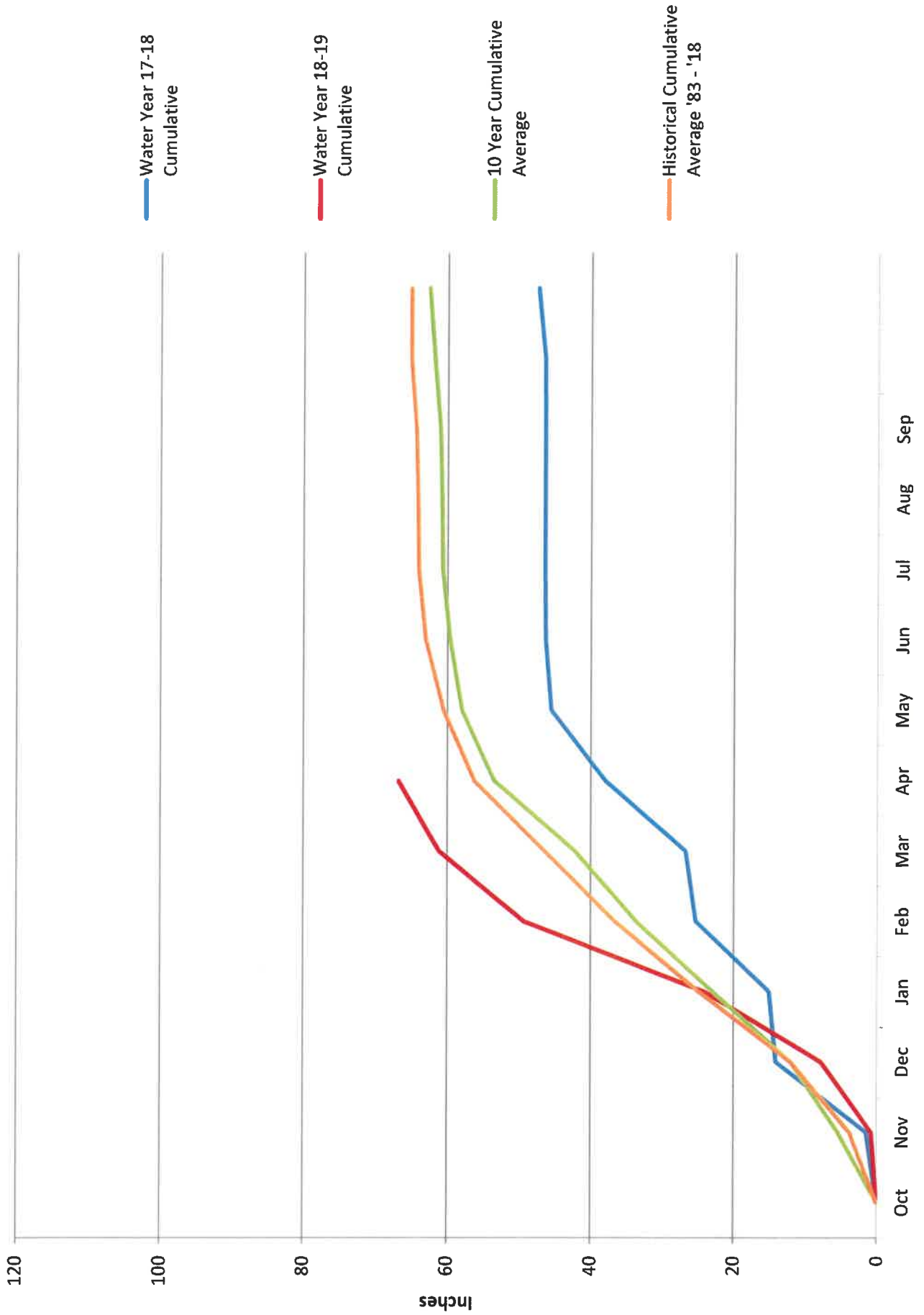
9. April 2nd – AQMD inspection of TRF standby generator. This inspection was to verify the generator installed matched Authority to Construct permit and was installed per regulations.
10. April 3rd – Maintenance installed and Operations started disinfection process of 3000 gallon temporary tank at Fieldbrooks Morris reservoir site.
11. April 8th & 15th – 90 Day crane inspections. Regulatory required inspections of all district cranes.
12. April 9th
 - a. I conducted our quarterly SB198 safety meeting.
 - b. Coastal tree on-site removing a Spruce tree for re-construction of Collector 2 cable car building landing.
13. April 10th – 12th – Maintenance staff cleaned and made repairs to Fieldbrooks Morris reservoir.
14. April 12th – I went to Ruth to meet with contractor and make final punch list for the bunkhouse.
15. April 17th – Safety meetings – Confined Space, Gas detector use, Heat illness prevention
16. April 23rd – Six Month Chlorine System Maintenance.
17. April 26th – Tested valves at I/W reservoir to verify seal for surge tower demo project
18. Current and Ongoing Projects
 - a. Work on FY 19/20 budget
 - b. GRS has been onsite working on new landing for Cable Car 2 shed. Completion of cable car shed expected in early May.
 - c. Ruth Bunkhouse remodel – Construction complete. Contractor is still trying to deal with permit issues with Trinity County. We have supplied all known needed documentation and the contractor has tried to set up a meeting with them but they have not responded.

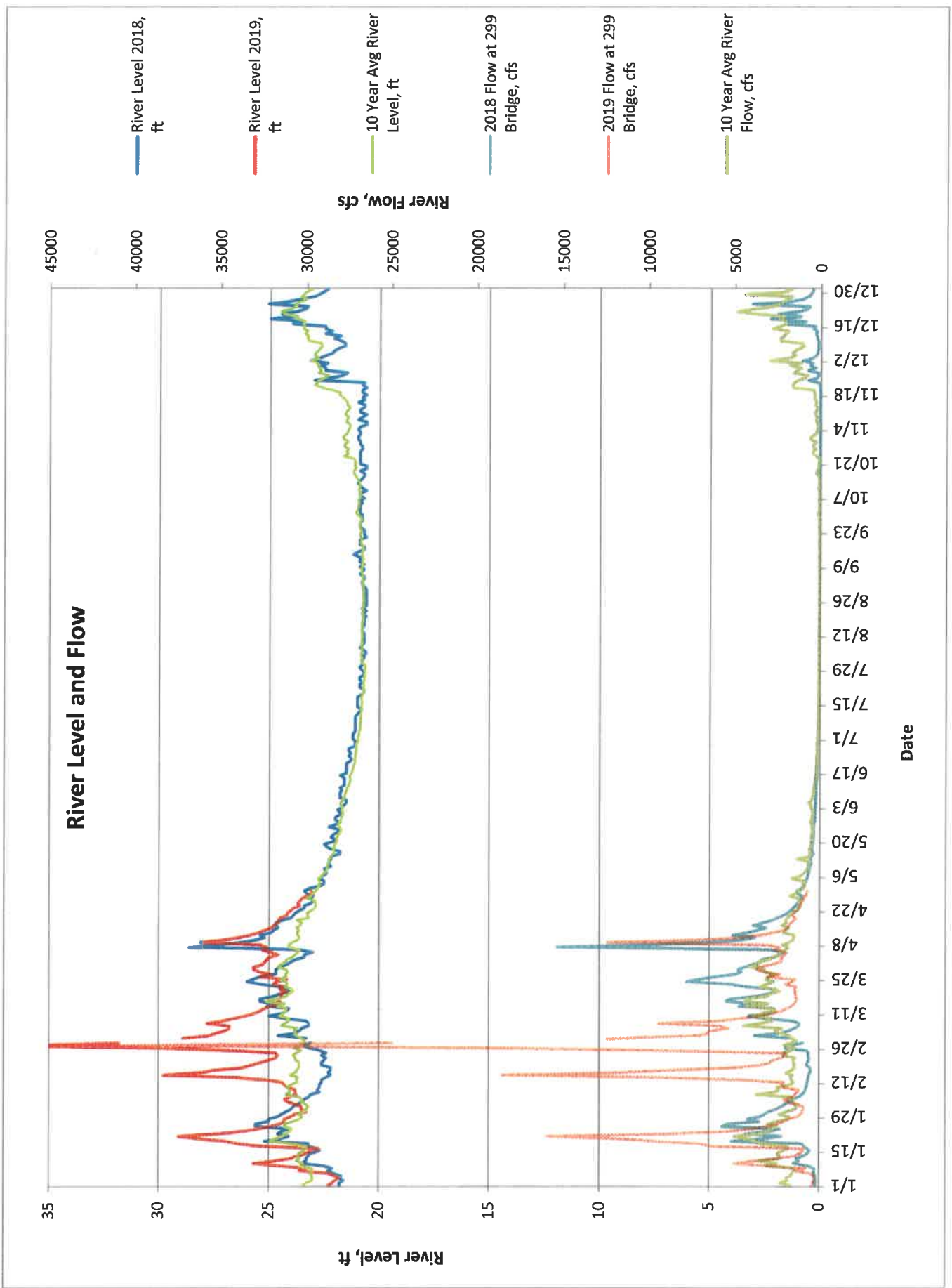
Ruth Lake Elevation



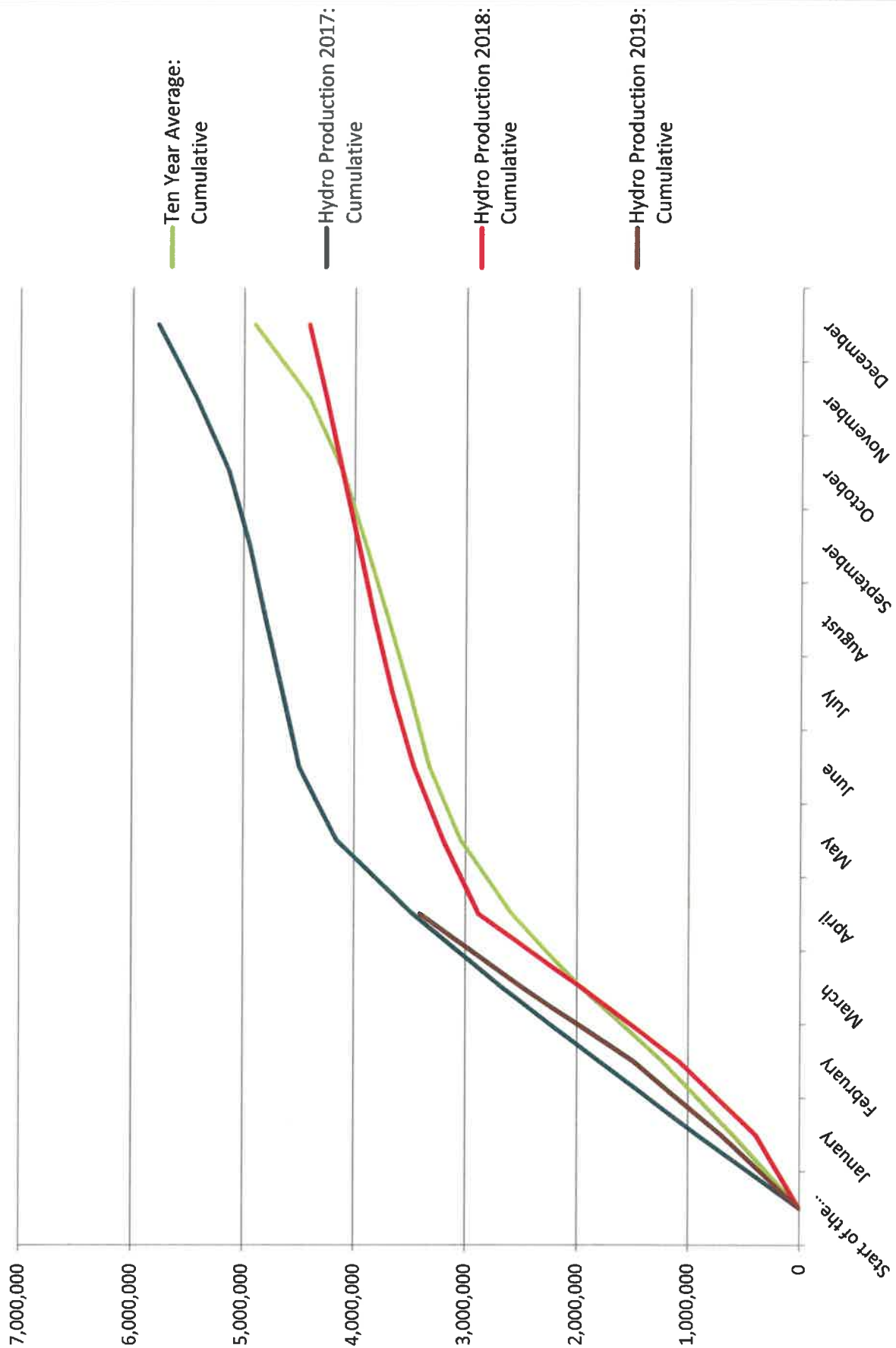


Ruth Rainfall - Water Year 2018-2019

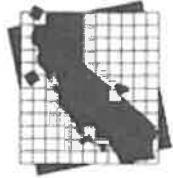




Ruth Hydro Production: kW per Month



MANAGEMENT

**CSDA**

California Special Districts Association

Districts Stronger Together

By CSDA ADMIN posted 04/29/19

Costly Public Records Act Legislation Moving Through Legislature

Last week, several bills related to the California Public Records Act (CPRA) passed out of different committees in both houses of the California State Legislature. A brief summary of each bill, the potential impacts it may have on special districts, and its current status is listed below:

Assembly Bill 1184 (Gloria) – Requirement to Maintain Emails for 2-Years -- OPPOSE

Assembly Member Todd Gloria (D-San Diego) is authoring Assembly Bill 1184, which requires all public agencies, including special districts, to maintain all emails related to the business of the agencies for a minimum of two years. Unlike all other record retention requirements in current law, AB 1184 places new retention requirements directly into the CPRA, purposely circumventing the reimbursement process and placing the costs of this unfunded mandate squarely on the shoulders of local agencies and the constituents they serve.

AB 1184 does not require any new disclosures or provide any new exemptions to the CPRA, it is simply a data storage requirement that will result in increased costs on agencies for purchasing servers to store the emails as well as additional costs for reviewing the resulting enormous cash of emails should there be request for the emails using the CPRA.

CSDA is opposed to this data storage legislation because of the unfunded mandates it will place on our member districts.

Status: Will be heard next in the Assembly Appropriations Committee.

Senate Bill 518 (Wieckowski) – CPRA 998 Settlement Agreements -- OPPOSE

Senator Bob Wieckowski (D – Fremont) has introduced Senate Bill 518, which would eliminate the utility of Section 998 settlement offers in CPRA lawsuits against public agencies. This bill will incentivize additional litigation and increase costs to public agencies for CPRA disputes.

The CPRA was created to ensure the public has access to information concerning the conduct of the people's business as a fundamental and necessary right of every person in this state, a charge our public agencies do not take lightly. Failure of a public agency to disclose records pursuant to the CPRA can result in significant financial consequences for the agency from potential litigation.

Under current law, records requesters that believe a public agency has improperly withheld a record may sue the agency immediately. There is no “meet and confer” requirement that a requester work with an agency to resolve a dispute over any records that may have been withheld by an agency. Additionally, should a requestor prevail in court by having even a single record released that had previously been withheld, the CPRA mandates that a court award costs and reasonable attorney fees to the plaintiff. Offers to compromise made under Code of Civil Procedure section 998 (“Section 998 offers”) are intended to encourage litigants to settle their disputes in an amicable and reasonable fashion and avoid excessive litigation costs.

Section 998 permits either party involved in litigation, plaintiff or defense, to make an offer to settle a dispute before proceeding to trial or arbitration, and if it is not accepted and the litigating party fails to achieve a better result than they could have achieved by accepting the Section 998 offer, the party is not entitled to post-offer costs and must pay the defendant’s post-offer costs.

Proposing to eliminate the Section 998 litigation practice would discourage plaintiffs’ attorneys in CPRA cases from settling because they would face no consequence for rejecting a reasonable and fair offer, but would have potentially significantly more to gain in fees by proceeding with a costly litigation process. This would hold true even if an attorney’s client receives no additional benefit other than what would have been offered in a settlement. SB 518 creates a lopsided benefit to plaintiff attorneys over public agencies that encourages costly litigation, when a simple agreement could be reached instead. It is for these reasons that CSDA is opposed to SB 518.

Status: Will be heard next in the Senate Appropriations Committee.

**Senate Bill 749 (Durazo) – Trade Secret Exemption and Reverse CPRA Actions --
OPPOSE**

In response to CSDA's opposition, Senator Durazo (D- Los Angeles) amended her bill, Senate Bill 749, removing significant areas of concern related to the California Public Records Act (CPRA).

The amendments remove Section 2 of the bill, pertaining to "reverse-CPRA" lawsuits. The removed provisions include:

1. In reverse CPRA actions, a requester of records shall be named as a real party in interest and may participate fully in the case.
2. In reverse CPRA actions, if the petitioner fails to prevent the disclosure of records, the petitioner shall pay the attorney fees of the requester.
3. In reverse CPRA actions, if the court finds that the public agency delayed disclosure of the record to facilitate the filing of the reverse public records action, or if the public agency declined to defend its position that the record was subject to disclosure, then the public agency shall pay the requester's reasonable attorney's fees.

Moving forward, the bill will have a single provision that seeks to remove the "Trade Secrets" exemption from the CPRA for records of wages, benefits, working hours, and other employment terms and conditions of employees working for a private industry employer, or a subcontractor of a private industry employer, pursuant to a contract with a state or local agency. This provision may impact the number of bids special districts receive in response to RFPs and the amount of information provided in those bids.

CSDA currently holds an oppose position on SB 749, but is evaluating the position on the bill going forward since the recent amendments addressed the most significant concerns.

Status: Will be heard next in the Senate Appropriations Committee.



CALIFORNIA SPECIAL DISTRICTS ASSOCIATION PRIORITIES

TAKE ACTION BRIEF

May 2019

May will be a busy month in the Legislature with several major deadlines quickly approaching. May 10 is the last day for fiscal committees to meet and refer bills to the floor for consideration by the body. By May 31, bills must be passed in their respective houses in order to move forward this year.

Be sure to join us in Sacramento for Special Districts Legislative Days on May 21-22 to hear the latest legislative updates and join together to take action on behalf of your district and your community. Visit legislatedays.csda.net to register.



Inside this edition of the Take Action Brief:

Forced Consolidation Bill Guttled.....2

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Surplus Land Bill Significantly Scaled Back in Committee – Concerns Remain.....6

Special Districts Help Stop Divestment Legislation.....7

2019 Student Video Contest Launches.....8

Learn More, Utilize Resources, Join Today, and Stay Informed.....9

Contact a local CSDA representative near you!

Dane Wadlé
 Colleen Haley
 Cole Karr
 Steven Nascimento
 Chris Palmer

Northern & Sierra Networks
 Bay Area Network
 Central Network
 Coastal Network
 Southern Network

danew@csda.net
colleenh@csda.net
colek@csda.net
stevenn@csda.net
chrisp@csda.net



TAKE ACTION BRIEF

➤ REVENUE, FINANCES, AND TAXATION

CSDA's long range policy priority on revenue, finances, and taxation is to ensure adequate funding for special districts' safe and reliable core local service delivery. Protect special districts' resources from the shift or diversion of revenues without the consent of the affected districts. Promote the financial independence of special districts and afford them access to revenue opportunities equal to that of other types of local agencies.

Forced Consolidation Bill Gutted

AB 600 (Chu) was amended in March to require local agencies to plan for water and other services in disadvantaged unincorporated communities (DUCs). It contemplated a litany of redundant, unfunded, and unrealistic mandates on local agencies including certain special districts.

Specifically, this bill would have required special districts that have more than 500 service connections and that provide drinking water or wastewater services to create and implement an accessibility plan to provide safe drinking water, wastewater services, storm water drainage, and structural fire protection in certain DUCs as identified in the land use element of a city or county's general plan, regardless if the district was capable of providing those services to the DUC or if it would have benefited either party.

Once the special districts and other local agencies have completed their accessibility plans, it would have then required the LAFCO to determine which entity was best positioned to provide adequate water or wastewater services to the affected territory. This determination would then set into motion a host of administrative hurdles and constitutionally questionable mandates.

Just a few of them included:

- Districts would be tasked with creating an accessibility plan at their own expense for services they may never provide to a jurisdiction that may not even be interested in receiving services from the district.
- Each city, county, and qualified special district would have been required to provide an annual progress report with respect to its accessibility plan at a noticed public hearing and post it to their websites.
- Costs and fees for services provided to the affected territory through implementation of the accessibility plan could not exceed the cost of providing service, while at the same time requiring that fees and conditions related to service be consistent with fees and conditions placed on other new customers or service recipients, raising constitutional questions.
- LAFCOs would have been prohibited from adopting, amending, or updating a sphere of influence that removed a disadvantaged community from the sphere of influence of a city or special district, unless the LAFCO made certain findings; moreover, the LAFCO would have been prohibited from approving certain annexations if the DUCs issues were not addressed.
- Other local agencies would have faced mandatory annexations if DUC needs were not addressed, regardless if it were beneficial to any party.

CSDA and its members firmly believe that all Californians should have access to safe drinking water, including DUCs and other jurisdictions. Unfortunately, AB 600 as written did not achieve this goal.

AB 600 could have exacerbated some of the problems, creating financial hardships for existing service providers, disincentivizing affordable housing and commercial development, attaching DUC's to the wrong local agency, and possibly complicate existing studies, statutes, and efforts to achieve the same goals as the measure.

CSDA, along with other local government stakeholders, successfully advocated against this measure. The author verbally agreed in committee to take amendments that will remove nearly all of the above mandates. Once the anticipated amendments are published, CSDA will reconsider its position.

Should you have any questions about the bill, please contact CSDA Legislative Representative Anthony Tannehill at anthonyt@csda.net.



CALIFORNIA SPECIAL DISTRICTS ASSOCIATION PRIORITIES

TAKE ACTION BRIEF

➤ GOVERNANCE AND ACCOUNTABILITY

CSDA's long range policy priority on governance and accountability is to enhance special districts' ability to govern as independent, local government bodies in an open and accessible manner. Encourage best practices that avoid burdensome, costly, redundant, or one-size-fits all approaches. Protect meaningful public participation in local agency formations, dissolutions, and reorganizations, and ensure local services meet the unique needs, priorities, and preference of each community

Costly Public Records Act Legislation Moving Through Legislature

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CSDA currently holds an oppose position on SB 749, but is evaluating the position on the bill going forward since the recent amendments addressed the most significant concerns.

Status: Will be heard next in the Senate Appropriations Committee.

Should you have any questions or comments about these bills, please contact CSDA Senior Legislative Representative Dillon Gibbons at dillong@csda.net.



➤ INFRASTRUCTURE, INNOVATION, AND INVESTMENT

CSDA's long range policy principal regarding infrastructure, innovation, and investment is to encourage prudent planning for investment and maintenance of innovative long-term infrastructure. CSDA supports the development of fiscal tools and incentives to assist special districts in their efforts to meet California's changing demands, ensuring the efficient and effective delivery of core local services.

Surplus Land Bill Significantly Scaled Back in Committee – Concerns Remain

In a positive step for special districts, AB 1486 (Ting) was significantly amended in the Assembly Local Government Committee. Assembly Member Phil Ting (D - San Francisco) agreed to amendments proposed by the Assembly Local Government Committee to remove the bill's new definition of "disposal" under the Surplus Land Act (SLA). In effect, leases and transfers of land will continue to not be subject to the SLA.

AB 1486 generated intense opposition from a coalition of public agencies, including CSDA. Over 40 CSDA members submitted letters of opposition to the bill and called members of the Committee. Thanks largely to this grassroots effort, the author was compelled to accept the Committee's amendment in order to keep AB 1486 moving through the Legislature.

As originally introduced, AB 1486 would have imposed additional burdens on all local public agencies trying to sell, lease, or transfer their land. Under AB 1486, anytime an agency moved to sell, lease, or transfer land, the agency would be required to notify affordable housing developers, schools, and park agencies and offer these entities a right of first refusal. These requirements are problematic for public agencies that have valid reasons to lease or otherwise protect land they own.

Even with the lease provisions removed from the bill, CSDA remains opposed to AB 1486 while working through our outstanding concerns with the Committee and author. Items remaining to be addressed include:

- Allowing agencies discretion to determine what land is actually surplus to their mission/purpose.
- Allowing agencies to conduct informal and formal negotiations to determine the market value of their land without triggering the requirements of the SLA.
- Removing provisions that would invalidate land transfers where an agency did not follow the SLA when required.

If you have any questions about AB 1486, please contact CSDA Legislative Representative Rylan Gervase at rylang@csda.net.



➤ HUMAN RESOURCES AND PERSONNEL

CSDA's long range policy priority on human resources and personnel is to promote policies related to hiring, management, and benefits and retirement that afford flexibility, contain costs, and enhance the ability to recruit and retain highly qualified, career-minded employees to public service. As public agency employers, support policies that foster productive relationships between management and employees, both represented and non-represented.

Special Districts Help Stop Divestment Legislation

Facing significant opposition in the final hearing of the Assembly Public Employment and Retirement Committee prior to the fiscal bill deadline, Assembly Member Rob Bonta chose to pull his public pension divestment bill, Assembly Bill 33, from the hearing agenda, essentially killing the bill for 2019. AB 33 would have required CalPERS and CalSTRS divest from private prisons.

Many public agencies utilize CalPERS to provide retirement benefits to their employees. Within CalPERS is the Public Employees Retirement Fund (PERF). The PERF, which as of January had \$302 billion in total assets, is the fund used to pay out retirement benefits to CalPERS members. Over the last decade, the PERF has been negatively impacted by the downturn in the economy and currently has only 67 percent of the total funding needed to provide retirees with their promised benefits.

Due to the financial cost to local agencies and their employees, CSDA opposes any efforts to divert CalPERS from its duty to its members, including divestment of CalPERS assets to achieve political objectives, if the divestment would have a negative impact on the overall health of the fund. Divestment harms investment performance and increases transaction costs.

As of December 31, 2018, a preliminary estimate indicates that the PERF has approximately \$10 million in publicly traded equity holdings that could meet the definition of affected investment vehicles specified by the AB 33. Additionally, CalPERS staff has previously noted in their analysis of divestment legislation that "every dollar in investment returns that is foregone, or expended in unnecessary transaction costs and fees, must be made up for in employer and employee contributions." Therefore, AB 33 could have been expected to contribute to an increased burden on employees and employers through increased contribution rates, and potentially impair CalPERS' ability to deliver promised benefit payments.

Forcing divestment of California retirees' funding ultimately transfers the ownership of the investments to another investor at a great cost to the PERF, and removes the ability for CalPERS, as shareowners, to influence the company to act responsibly. CSDA supports alternative approaches to effecting change, such as CalPERS proxy access efforts to affect change from within businesses to ensure they are well managed for sustained, long-term success.

Please share any questions or concerns regarding the bill with CSDA Senior Legislative Representative Dillon Gibbons at dillong@csda.net.

ACWA

40 years ago in 1979

JPIA Opens Its Doors

1979 - 89 members (78 still remaining)
 Liability Program offered

Today - 388 members

Liability Program (1979), Property Program (1983), Workers' Comp Program (1984), Employee Benefits Program (2012)

First Refund - 1981

\$560,000



2018 - \$5 million

Boiler & Machinery Coverage Added To Property Program - 1996



Top Music



Hot Stuff - Donna Summer
 Heart of Glass - Blondie

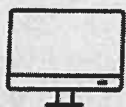
What a Fool Believes - Doobie Brothers

Employment Practices Hot Line Established - 2007



Taken over 2,000 calls since then

Cyber Liability Coverage 2017



Introduced



Top Movies

Alien

Kramer vs. Kramer

Star Trek: The Motion Picture

Top TV Shows



Dallas

Hart to Hart

Dukes of Hazzard

1979 - Remember when:

1 lb bacon - \$1.30

1 gal. of gas - \$0.86

1st class mail - \$0.15



JPIA Employees

1979 - 2

2019 - 50





YOUR BEST PROTECTION

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

May 2, 2019

ACWA JPIA

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

phone
916.786.5742
800.231.5742

direct line
916.774.7050
800.535.7899

fax
916.774.7040

claims fax
916.786.0209

www.acwajpia.com

President
E.G. "Jerry" Gladbach

Vice President
Tom Cuquet

Chief Executive Officer
Walter "Andy" Sells

Executive Committee
Tom Cuquet
David Drake

E.G. "Jerry" Gladbach
David T. Hodgkin

W.D. "Bill" Knutson
Steven LaMar

Melody A. McDonald
J. Bruce Rupp
Kathleen Tiegs

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

Re: H.R. LaBounty Safety Awards Program

Dear Staff:

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

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

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

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

Sincerely,

Walter "Andy" Sells
Chief Executive Officer

519:tl

Enc. Certificate

JPIA PROUDLY PRESENTS

THE

H.R. LABOUNTY SAFETY AWARD

TO

**Humboldt Bay MWD
Staff and Supervisors**

May 2019





ACWA 2019 Spring Conference & Exhibition

PRELIMINARY AGENDA

May 7-10, 2019 • Monterey

ACWA JPIA - MONDAY, MAY 6

- 8:30 - 10:00 AM**
 - ACWA JPIA Program Committee
- 10:15 - 11:15 AM**
 - ACWA JPIA Executive Committee
- 1:30 - 4:00 PM**
 - ACWA JPIA Board of Directors
- 4:00 - 5:00 PM**
 - ACWA JPIA Town Hall
- 5:00 - 6:00 PM**
 - ACWA JPIA Reception

TUESDAY, MAY 7

- 8:00 AM - 9:45 AM**
 - Agriculture Committee
- 8:00 AM - 6:00 PM**
 - Registration
- 8:30 AM - Noon**
 - ACWA JPIA Seminars
- 9:00 AM - 4:00 PM**
 - ACWA Legal Briefing & CLE Workshop
- 10:00 - 11:45 AM**
 - Groundwater Committee
 - Local Government Committee
- 11:00 AM - Noon**
 - Outreach Task Force
- Noon - 2:00 PM**
 - ACWA 101 & Luncheon
 - Committee Lunch Break
- 1:00 - 2:45 PM**
 - Energy Committee
 - Finance Committee
 - Scholarship & Awards Subcommittee
 - Water Management Committee
- 1:30 - 3:30 PM**
 - ACWA JPIA: Sexual Harassment Prevention for Board Members & Managers (AB 1825)
- 3:00 - 4:45 PM**
 - Communications Committee
 - Federal Affairs Committee
 - Membership Committee
 - Water Quality Committee
- 5:00 - 6:30 PM**
 - Welcome Reception in the Exhibit Hall

WEDNESDAY, MAY 8

- 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 - 1:45 PM**
 - General Session Luncheon (*Ticket Required*)
- 2:00 - 3:15 PM**
 - Attorney Program
 - Communications Committee Program
 - Energy Committee Program
 - Exhibitor Case Study
 - Region Program
 - Statewide Issue Forum
 - Water Industry Trends Program
- 3:30 - 4:45 PM**
 - 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, MAY 9

- 7:30 AM - 4 PM**
 - Registration
- 7:45 - 9:15 AM**
 - Regions 6-10 Membership Meetings

- 8:00 AM - Noon**
 - Exhibit Hall
- 8:00 - 9:15 AM**
 - Networking Continental Breakfast, Exhibit Hall (*Ticket Required*)
- 9:30 - 11:00 AM**
 - Attorneys Program
 - Exhibitor Demos
 - Finance Program
 - Region Issue Forum
 - Statewide Issue Forum
 - Water Industry Trends Program
- 9:30 - 11:45 AM**
 - Ethics Training (AB 1234) - *Limited Seating*
- 11:00 - 11:30 AM**
 - Prize Drawings in the Exhibit Hall
- 11:45 AM - 1:45 PM**
 - General Session Luncheon (*Ticket Required*)
- 2:00 - 3:15 PM**
 - Attorneys Program
 - Exhibitor Case Studies
 - Federal Issues Forum
 - Statewide Issue Forum
 - Water Industry Trends Program
- 3:30 - 5 PM**
 - Regions 1-5 Membership Meetings
- 6:00 - 7:00 PM**
 - Gen Jam Reception
- 7:00 - 10:00 PM**
 - Dinner & Entertainment (*Ticket Required*)

FRIDAY, MAY 10

- 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

TUESDAY, MAY 7

- 7:00 AM - 4 PM**
 - ACWA Spring Conference Golf Tournament

THURSDAY, MAY 9

- 6:45 - 8:30 AM**
 - San Joaquin Valley Agricultural Water Committee

All conference programs are subject to change.

ACWA-SPONSORED SAFE DRINKING WATER TRUST BILL PASSES SECOND SENATE POLICY COMMITTEE

- BY HEATHER ENGEL
- APR 23, 2019
- WATER NEWS



SB 669, legislation authored by Senator Anna Caballero (D-Salinas) that would create The Safe Drinking Water Trust, passed the Senate Governmental Organization Committee today by a 15-0 vote and is now headed to the Senate Appropriations Committee.

ACWA and the California Municipal Utilities Association (CMUA) are sponsoring the bill which would help community water systems in disadvantaged communities provide access to safe drinking water.

ACWA Deputy Executive Director of Government Relations Cindy Tuck opened the support testimony for the bill, and many ACWA member agencies or their representatives supported the bill at the hearing.

“With a record budget surplus for the 2019-’20 fiscal year, it is the perfect time to create and fund a Safe Drinking Water Trust as a durable funding solution,” Tuck said. “This problem can be solved without a water tax.”

SB 669 would create The Safe Drinking Water Trust to be funded with an infusion of General Fund dollars during a budget surplus year. The state would invest the principal, and the net income would provide the needed ongoing revenue stream for drinking water solutions in disadvantaged communities. It is a better approach than a statewide water tax that would tax a resource that is essential to life and work against water affordability throughout the state.

In addition to supporting SB 669, ACWA has an oppose-unless-amended position on the water tax proposals in the Newsom Administration’s budget trailer bill and AB 217 (E. Garcia).

ACWA’s Spring Conference will include a Statewide Issues Forum on funding for safe drinking water that will be moderated by State Water Resources Control Board Chair Joaquin Esquivel. Secretary of Agriculture Karen Ross will be one of the panelists.



MEMORANDUM

Date: May 2, 2019

To: ACWA REGION 1 MEMBER AGENCY PRESIDENTS AND GENERAL MANAGERS
(sent via e-mail)

From: ACWA REGION 1 NOMINATING COMMITTEE
Penny Caudras, Hidden Valley Lake Community Services District
David Hull, Humboldt Community Services District
Drew McIntyre, North Marin Water District

The Region 1 Nominating Committee is looking for ACWA members who are interested in leading the direction of ACWA Region 1 for the 2020-2021 term. The Nominating Committee is currently seeking candidates for the Region 1 Board, which is comprised of Chair, Vice Chair and up to five Board Member positions.

The leadership of ACWA's ten geographical regions is integral to the leadership of the Association as a whole. The Chair and Vice Chair of Region 1 serve on ACWA's Statewide Board of Directors and recommend all committee appointments for Region 1. The members of the Region 1 Board determine the direction and focus of region issues and activities. Additionally, they support the fulfillment of ACWA's goals on behalf of members and serve as a key role in ACWA's grassroots outreach efforts.

If you, or someone within your agency, are interested in serving in a leadership role within ACWA by becoming a Region 1 Board Member, please familiarize yourself with the Role of the Regions and Responsibilities; the Election Timeline; and the Region 1 Rules and Regulations and complete the following steps:

- **Complete the attached Region Board Candidate Nomination Form HERE**
- **Obtain a Resolution of Support from your agency's Board of Directors (Sample Resolution HERE)**
- **Submit the requested information to ACWA as indicated by Friday, June 28, 2019**

The Region 1 Nominating Committee will announce their recommended slate by July 31, 2019. On August 1, 2019 the election will begin with ballots sent to General Managers and Board Presidents. One ballot per agency will be counted. The election will be completed on September 30, 2019. On October 4, 2019, election results will be announced. The newly elected Region 1 Board Members will begin their two-year term of service on January 1, 2020.

If you have any questions, please contact Regional Affairs Representative Brian Sanders, at brians@acwa.com or (916) 441-4545.

2019 ACWA Region Election Timeline 2020-2021 Term

- February 28:** **NOMINATING COMMITTEES APPOINTED**
- With concurrence of the region board, the region chairs appoint at least three region members to serve as the respective region's Nominating Committee
 - Those serving on nominating committees are ineligible to seek region offices
 - Nominating Committee members are posted online at www.acwa.com
- March 1-31:** **NOMINATING COMMITTEE TRAINING**
- Nominating Committee packets will be e-mailed out to each committee member
 - ACWA staff will hold a training session via conference call with each nominating committee to educate them on their specific role and duties
 - Regions 1-10 Nominating Committees: via Go-to-Meeting
- May 13:** **CALL FOR CANDIDATES**
- The call for candidate nominations packet will be e-mailed to ACWA member agency Board Presidents and General Managers
- June 28:** **DEADLINE FOR COMPLETED NOMINATION FORMS**
- Deadline to submit all Nomination Forms and board resolutions of support for candidacy for region positions
 - Nominating Committee members may need to solicit additional candidates in person to achieve a full complement of nominees for the slate
- July 10:** **CANDIDATE INFORMATION TO NOMINATING COMMITTEES**
- All information submitted by candidates will be forwarded from ACWA staff to the respective region Nominating Committee members with a cover memo explaining their task

July 11 - 31:

RECOMMENDED SLATES SELECTED

- Nominating Committees will meet to determine the recommended individuals for their region. The slate will be placed on the election ballot.
- Nominating Committee Chairs will inform their respective ACWA Regional Affairs Representative of their recommended slate by July 24
- Candidates will be notified of the recommended slate by August 1
- The Nominating Committee Chair will approve the official region ballot

August 1:

ELECTIONS BEGIN

- All 10 official electronic ballots identifying the recommended slate and any additional candidates for consideration for each region will be produced and e-mailed to ACWA member agencies only
- Only one ballot per agency will be counted

September 30:

ELECTION BALLOTS DUE

- ***Deadline for all region elections. All region ballots must be received by ACWA by September 30, 2019***

October 4:

ANNOUNCEMENT OF ELECTION RESULTS

- Newly-elected members of the region boards will be contacted accordingly
- An ACWA Advisory will be distributed electronically to all members reporting the statewide region election results
- Results will be posted at acwa.com and will be published in the October issue of ACWA News

ACWA Region 1 Rules & Regulations

Each region shall organize and adopt rules and regulations for the conduct of its meetings and affairs not inconsistent with the Articles of Incorporation or bylaws of the Association (ACWA Bylaw V, 6.).

Officers

The chair shall appoint a secretary to the Board if one is deemed necessary.

Meetings

Region 1 will meet quarterly, subject to call of the chair, with two of those meetings to be held at ACWA spring and fall conferences.

Attendance

If a region chair or vice chair is no longer allowed to serve on the Board of Directors due to his / her attendance, the region board shall appoint from the existing region board a new region officer. (ACWA Policy & Guideline Q, 1.)

If a region chair or vice chair misses three consecutive region board / membership meetings, the same process shall be used to backfill the region officer position. (ACWA Policy & Guideline Q, 1.)

If a region board member has three consecutive unexcused absences from a region board meeting or general membership business meeting, the region board will convene to discuss options for removal of the inactive board member. If the vacancy causes the board to fail to meet the minimum requirement of five board members, the region must fill the vacancy according to its rules and regulations. (ACWA Policy & Guideline Q, 3.)

Vacancy

If the chair's position becomes vacant, the vice chair will fill the chair's position.

If the vice chair's position becomes vacant, the alternate chair will fill the vice chair's position

Elections

All nominations received for the region chair, vice chair and board positions must be accompanied by a resolution of support from each sponsoring member agency, signed by an authorized representative of the Board of Directors. Only one individual may be nominated from a given agency to run for election to a region board. Agencies with representatives serving on the nominating committees should strive not to submit nominations for the region board from their agency. (ACWA Policy & Guideline P, 2.)

Election ballots will be e-mailed to ACWA member agency general managers and presidents.

The nominating committee shall consist of three to five members.

The nominating committee should pursue qualified members within the region to run for the region board, and should consider geographic diversity, agency size and focus in selecting a slate.

See the current region election timeline for specific dates.

Endorsements

ACWA, as a statewide organization, may endorse potential nominees and nominees for appointment to local, regional, and statewide commissions and boards. ACWA's regions may submit a recommendation for consideration and action to the ACWA Board of Directors to endorse a potential nominee or nominee for appointment to a local, regional or statewide commission or board. (ACWA Policy & Guideline P, 3.)

Committee Recommendations & Representation

All regions are given equal opportunity to recommend representatives of the region for appointment to a standing or regular committee of the Association. If a region fails to provide full representation on all ACWA committees, those committee slots will be left open for the remainder of the term or until such time as the region designates a representative to complete the remainder of the term. (ACWA Policy & Guideline P, 4. A.)

At the first region board / membership meeting of the term, regions shall designate a representative serving on each of the standing and regular committees to serve as the official reporter to and from the committee on behalf of the region to facilitate input and communication. (ACWA Policy & Guideline P, 4. B.)

Tours

ACWA may develop and conduct various tours for the regions. All tour attendees must sign a "release and waiver" to attend any and all region tours. Attendees agree to follow environmental guidelines and regulations in accordance with direction from ACWA staff; and will respect the rights and privacy of other attendees. (ACWA Policy & Guideline P, 6.)

Finances

See "Financial Guidelines for ACWA Region Events" document.

Amending the Region Rules & Regulations

ACWA policies and guidelines can be amended by approval of the ACWA Board of Directors.

The Region 1 Rules & Regulations can be amended by a majority vote of those present at any Region 1 meeting as long as a quorum is present.

THE ROLE OF THE REGIONS

Mission:

ACWA Regions will provide the grassroots support to advance ACWA's legislative and regulatory agenda.

Background:

As a result of ACWA's 1993 strategic planning process, known as Vision 2000, ACWA modified its governance structure from one that was based on sections to a regional-based configuration. Ten regions were established to provide geographic balance and to group agencies with similar interests.

The primary charge of regions:

- To provide a structure where agencies can come together and discuss / resolve issues of mutual concern and interest and based on that interaction, provide representative input to the ACWA board.
- To assist the Outreach Task Force in building local grassroots support for the ACWA Outreach Program in order to advance ACWA's legislative and regulatory priorities as determined by the ACWA Board and the State Legislative, Federal Affairs or other policy committees.
- To provide a forum to educate region members on ACWA's priorities and issues of local and statewide concern.
- To assist staff with association membership recruitment at the regional level.
- To recommend specific actions to the ACWA Board on local, regional, state and federal issues as well as to recommend endorsement for various government offices and positions.
 - *Individual region boards CANNOT take positions, action or disseminate communication on issues and endorsements without going through the ACWA Board structure.*

Region chairs and vice chairs, with support from their region boards, provide the regional leadership to fulfill this charge.

GENERAL DUTIES / RESPONSIBILITIES FOR REGION OFFICERS

Region Chair:

- Serves as a member of the ACWA Board of Directors at bimonthly meetings at such times and places as the Board may determine. The Chair will also call at least two Region membership meetings to be held at each of the ACWA Conferences and periodic Region Board meetings.
- Is a member of ACWA's Outreach Program, and encourages region involvement.
 - Appoints Outreach Captain to help lead outreach effort within the region.

- Presides over all region activities and ensures that such activities promote and support accomplishment of ACWA's Goals.
- Makes joint recommendations to the ACWA President regarding regional appointments to all ACWA committees.
- Appoints representatives in concurrence of the region board, to serve on the region's nominating committee with the approval of the region board.
- Facilitates communication from the region board and the region membership to the ACWA board and staff.

Region Vice Chair:

- Serves as a member of the ACWA Board of Directors at bimonthly meetings at such times and places as the Board may determine. The Vice Chair will also participate in at least two Region membership meetings to be held at each of the ACWA Conferences and periodic Region Board meetings.
- In the absence of the chair and in partnership with the chair, exercises the powers and performs duties of the region chair.
- Is a member of ACWA's Outreach Program, and encourages region involvement.
- Makes joint recommendations to the ACWA president regarding regional appointments to all ACWA committees.

Region Board Member:

- May serve as alternate for the chair and/or vice chair in their absence (if appointed) to represent the region to the ACWA Board.
- Will participate in at least two Region membership meetings to be held at each of the ACWA Conferences and periodic Region Board meetings.
- Supports program planning and activities for the region.
- Actively participates and encourages region involvement in ACWA's Outreach Program.

RREDC/RCEA



BOARD OF DIRECTORS MEETING AGENDA

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

April 25, 2018
Thursday, 3:30 p.m.

In compliance with the Americans with Disabilities Act, if you need assistance to participate in this meeting, please contact the Clerk of the Board at the phone number, email or physical address listed above at least 72 hours in advance.

Pursuant to Government Code section 54957.5, all writings or documents relating to any item on this agenda which have been provided to a majority of the Board of Directors, including those received less than 72 hours prior to the RCEA Board meeting, will be made available to the public in the agenda binder located in the RCEA lobby during normal business hours, and at www.redwoodenergy.org.

PLEASE NOTE: Speakers wishing to distribute materials to the Board at the meeting are asked to provide 12 copies to the Clerk of the Board.

OPEN SESSION Call to Order

1. REPORTS FROM MEMBER ENTITIES

2. ORAL COMMUNICATIONS

This time is provided for people to address the Board or submit written communications on matters not on the agenda. At the conclusion of all oral and written communications, the Board may respond to statements. Any request that requires Board action will be set by the Board for a future agenda or referred to staff.

3. CONSENT CALENDAR

All matters on the Consent Calendar are considered to be routine by the Board and are enacted on one motion. There is no separate discussion of any of these items. If discussion is required, that item is removed from the Consent Calendar and considered separately. At the end of the reading of the Consent Calendar, Board members or members of the public can request that an item be removed for separate discussion.

3.1 Approve Minutes of March 28, 2019, Board Meeting.

3.2 Approve Disbursements Report.

3.3 Accept Financial Reports.

4. REMOVED FROM CONSENT CALENDAR ITEMS

Items removed from the Consent Calendar will be heard under this section.

5. OLD BUSINESS

5.1 Offshore Wind Project Update (Information only)

Presentation by staff and Project Manager Tyler Studds of EDPR Offshore North America.

6. NEW BUSINESS

6.1 County Climate Action Plan Contract

Authorize the Executive Director to execute a contract with the County of Humboldt to provide Climate Action Planning support services after final review and approval of any revisions by RCEA General Counsel.

6.2 Energy Efficiency Program Administrator Status Election

Authorize staff to prepare an energy efficiency plan for Board approval that meets the requirements set forth in utility code section 381.1 (e)-(f) and furthered in CPUC decision 14-01-033.

COMMUNITY CHOICE ENERGY (CCE) BUSINESS (Confirm CCE Quorum)

Items under this section of the agenda relate to CCE-specific business matters that fall under RCEA's CCE voting provisions, with only CCE-participating jurisdictions voting on these matters with weighted voting as established in the RCEA joint powers agreement.

7. OLD CCE BUSINESS

7.1. Energy Risk Management Quarterly Report

Accept Energy Risk Management Quarterly Report.

8. NEW CCE BUSINESS

8.1 PG&E Time of Use Transition Team Presentation (Information only)

END OF COMMUNITY CHOICE ENERGY (CCE) BUSINESS

9. STAFF REPORTS - None

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

NEXT REGULAR MEETING

Thursday, May 23, 2019, 3:30 p.m.
Humboldt Bay Municipal Water District Office
828 7th Street, Eureka, CA 95501



Redwood Coast Energy Authority

633 3rd Street, Eureka, CA 95501

Phone: (707) 269-1700 Toll-Free (800) 931-RCEA Fax: (707) 269-1777

E-mail: info@redwoodenergy.org Web: www.redwoodenergy.org

SECTION 14a PAGE NO. 3

BOARD OF DIRECTORS DRAFT MEETING MINUTES

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

**March 28, 2018
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 3:29 p.m. Notice of this meeting was posted on March 22, 2019. PRESENT: Vice Chair Austin Allison (left at 6:26 p.m.), Estelle Fennell (arrived 3:30 p.m.), Summer Daugherty, Dean Glaser, Dwight Miller, Robin Smith, Frank Wilson (arrived at 3:31 p.m.), Chair Michael Winkler, Sheri Woo. ABSENT: None. STAFF PRESENT: Business Planning and Finance Director Lori Biondini; Operations Director Dana Boudreau; Power Resources Director Richard Engel; Demand Side Management Director Lou Jacobson; Executive Director Matthew Marshall; Human Resources and Workforce Development Manager Patrick Owen; Account Services Manager Mahayla Slackerelli; Clerk of the Board Lori Taketa.

REPORTS FROM MEMBER ENTITIES

Director Miller reported that Trinidad has a new City Manager.

ORAL COMMUNICATIONS

Chair Winkler invited public comment.

Member of the public Walter Paniak requested quick links on RCEA's website, redwoodenergy.org, to https://www.energy.ca.gov/almanac/renewables_data/ and to <https://www.eia.gov/electricity/data/eia923/>, to give the public access to state and federal renewable energy, including local biomass plant, data.

Lost Coast Energy owner and Home Energy Rating System (HERS) rater Tyler Chapman stated that cities and the County should enforce a California Energy Commission mandate to prove residential and commercial HVAC state energy code compliance to improve health and address current problems.

Chair Winkler closed public comment and stated that he would like RCEA to help builders and building departments understand new code requirements and help them work together to ensure that new construction meets those requirements.

CONSENT CALENDAR

- 3.1 Approve Minutes of February 28, 2019, Board Meeting.
- 3.2 Approve Disbursements Report.
- 3.3 Accept Financial Reports.

- 3.4 Authorize the Executive Director to Execute an Amendment to the Power Purchase Agreement with DG Fairhaven Power, LLC Changing the Green Attribute Price Associated with Surplus Delivered Energy from \$14.50 per Megawatt-hour to \$17.00 per Megawatt-hour.**

Director Allison requested agenda item 3.4 be removed for discussion.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Glaser, Allison: Approve Consent Calendar items 3.1, 3.2 and 3.3.

The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: None. Abstentions: None.

REMOVED FROM CONSENT CALENDAR ITEMS

In response to inquiry by Director Allison whether the proposed price change affects the cost of energy, Power Resources Director Engel responded that should the plant operate at full capacity and provide energy above the contracted amount, costs would increase by 4%. Director Engel stated that if the DG Fairhaven plant operates as it has during its first contracted year, there will be no financial impact.

Chair Winkler invited public comment.

Member of the public Wendy Ring stated that adding a price increase that is not likely to take effect into a contract does not make sense.

Chair Winkler closed public comment.

Staff stated that DG Fairhaven requested the price amendment late in negotiations and that after consultation with The Energy Authority, staff negotiated a reduced price of \$17/MWh to accommodate market changes. Should the plant run at high capacity, the agency would likely resell the excess electricity and associated renewable energy certificates to neutralize cost impacts.

M/S: Glaser, Allison: Approve Consent Calendar item 3.4.

The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: None. Abstentions: None.

OLD BUSINESS - Offshore Wind Project Grid-Interconnection Study

Executive Director Marshall reported that phase one of the California Independent System Operator (CAISO) study to determine necessary upgrades for the project's grid connection is complete. The offshore wind project partners split the initial \$400,000 study deposit four

ways. The partners found phase one study results favorable and are proceeding with phase two which requires a deposit for a portion of the project's required grid upgrades. Half of this deposit is reimbursable. Depending upon whether the project successfully completes the multi-year CAISO study process, and upon RCEA's relationship to the project company, RCEA may be reimbursed more or the cash amount will be converted into project equity.

Staff and the Directors discussed: existing grid infrastructure and capacity, CAISO's need for a safe and reliable electric grid that minimizes power provider generation curtailment, anticipated business growth due to energy, that RCEA will be reimbursed by the state for grid upgrades benefitting other projects, Humboldt County coast's superior offshore wind resource, and the risks and rewards of long-term offshore wind investment.

Chair Winkler invited public comment.

Member of the public John Schaefer stated that he was opposed to authorizing the CAISO financial security posting. Mr. Schaefer stated that RCEA's participation in floating offshore wind energy development was risky because the industry is in trial stages in Europe and local feasibility studies should be undertaken by large developers.

An RCEA Community Choice Energy customer stated that she supports the offshore wind project and inquired whether the industry has been successful on the East Coast.

Member of the public Wendy Ring stated that it seemed risky for RCEA to put funds that could be used toward other forms of more affordable, obtainable clean energy into developing offshore wind. Ms. Ring requested background information supporting the decision to pursue offshore wind development.

Chair Winkler closed public comment.

Executive Director Marshall described developments in the European and American East Coast offshore wind industry and in floating foundation technology. Mr. Marshall reviewed the RCEA offshore wind project history from its request for qualifications which drew responses from five international offshore wind development companies, to the selection of RCEA's project company partners Aker Solutions, Principle Power and EDP Renewables.

Staff and directors discussed: balancing new technology risks with agency objectives, the need to revisit anticipated project costs, the project team's experience and abilities, the bullish offshore wind energy market, the cost and safety advantages of in-harbor platform assembly and maintenance, the ability to discontinue project involvement in the future if needed, the need for continued public education about the reasons for project involvement, the Board Offshore Wind Subcommittee's role in determining risk exposure and how the agency can achieve returns, The Energy Authority's role in evaluating power output and electricity price, state support of offshore wind and its role in meeting California's 100 percent renewable energy goal given the lack of nighttime solar energy production, expected cost reductions over time, and the environmental and economic opportunities presented by offshore wind.

M/S: Allison, Woo: Approve expenditure of \$273,500 toward the Redwood Coast Offshore Wind Project's CAISO interconnection process phase-2 financial security posting and authorize the Executive Director to execute any associated documents. The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: None. Abstentions: None.

NEW BUSINESS

6.1. FY 2018-2019 2nd Quarter Budget Summary

Director of Business Planning and Finance Lori Biondini reported that a legal services line item budget adjustment was necessary due to increased contract, regulatory and bankruptcy counsel work. Unexpended funds from the professional and program services spending category will cover the increase. Staff and the directors discussed: switching to seasonal cost matching to more closely match revenues with seasonal energy expenditures; the importance of legal counsel guidance while drafting offshore wind and airport microgrid project agreements and when engaging in Prop 39 work with educational institutions; and discussing month-to-month winter and summer rates during the budget process.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Miller, Glaser: Adopt proposed FY18-19 Budget Mid-Year Adjustment with revised FY18-19 Budget Totals.

The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: None. Abstentions: None.

6.2. Salary Survey Report (Information only, no action)

Human Resources and Workforce Development Manager Patrick Owen reported that Human Resources consultant Don Turko prepared a compensation policy that the Board passed in 2016 that required a salary survey be performed every two years. Staff Manager Owen presented an updated survey of similar jobs at comparable public agencies.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

6.3. RCEA Energy Efficiency Programs Update (Information only, no action)

Demand Side Management Director Lou Jacobson reported that RCEA's Energy Watch program partnership with PG&E has provided core agency energy efficiency services to historically underserved Humboldt County since 2006. RCEA's historic partnership with PG&E will change in 2020. The California Public Utilities Commission directed all investor owned utilities to increase third-party designed and implemented programs. PG&E responded by releasing a request for abstracts in late 2018 to solicit energy efficiency program concepts for 2020 implementation. In response, RCEA staff submitted three abstracts for PG&E's

consideration. The same competitive process is expected to be required for local government partnerships. RCEA staff plan on submitting abstracts in response to PG&E's solicitations; are exploring the viability of administering state energy efficiency funds, an option now available by being a CCA; and are also exploring the formation of a Rural Regional Energy Network to access funding for local ratepayer efficiency services.

Staff is also working with the Community Advisory Committee on a program to implement community-submitted energy efficiency programs with CCE funds. Staff will provide a list of CAC programs subcommittee-recommended programs to the Board in May or June.

Staff and the directors discussed: how projected funding through the different paths compares with previous Energy Watch program funding; the different pathways' potential staffing impacts; that administrative costs for Rural Regional Energy Network management could be \$1 million per year; the success of RENs in obtaining funding for other areas; and the difficulties in obtaining energy efficiency services through PG&E in rural areas.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

6.4. Audit Services RFP

Director of Business Planning and Finance Biondini reported that, citing the additional workload and expertise required to audit the Community Choice Energy program, David L. Moonie and Co. has declined to continue performing RCEA's audits.

The directors and staff discussed the possibility of working with a local accounting firm to perform the audit and the specialized nature of auditing a local government agency that performs wholesale power management.

Chair Winkler invited public comment. No one came forward to speak. Chair Winkler closed public comment.

M/S: Fennell, Glaser: Authorize staff to issue a request for proposals for professional financial audit services and complete a review of submitted proposals and authorize the Executive Director to contract with the selected respondent and execute all associated documents following review and approval by the RCEA Board Finance Subcommittee and RCEA Legal Counsel.

The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler, Woo. Noes: None. Absent: None. Abstentions: None.

COMMUNITY CHOICE ENERGY (CCE) BUSINESS

Chair Winkler determined a quorum was present to conduct CCE business.

OLD CCE BUSINESS

7.1. Feed-In Tariff

Account Services Manager Mahayla Slackerelli presented proposed Feed-in Tariff program materials in response to the Board's 2016 goal to initiate a feed-in tariff program and direction in November 2018 to prepare program materials. Ms. Slackerelli described the feed-in tariff program as a way for RCEA to set contract terms with renewable energy developers of up to 1 MW capacity to procure power. The program can accommodate up to 6 MW in contracts with a base price of \$80/MWh and includes price adjusting mechanisms.

Staff and the directors discussed: project incentives for brownfield locations, previously developed sites, and local projects; how preference for local projects is allowable given the Board-approved strategic plan goal of local job creation; and how projects cannot be located on prime agricultural land or irrigated farmland. Most program participants are anticipated to be solar developers of projects larger than household size and it was pointed out that CCE program funds for subsidizing different programs are limited.

Chair Winkler invited public comment.

Member of the public Wendy Ring inquired whether battery storage can be incentivized, or time-of-use rates applied, through the feed-in tariff program, and how feed-in-tariff program prices compare to projected energy costs for the next 20 years.

Chair Winkler closed public comment.

Staff stated that the program could be designed to work with battery storage; that The Energy Authority can forecast energy prices for the next five years with confidence, but projections past that time are difficult to make; and that all power purchasers face risks with state-required long-term power purchasing agreements.

M/S: Miller, Glaser: Authorize staff to launch the RCEA Feed-in Tariff program effective April 1 and to investigate battery storage incentives for future incorporation into the Feed-in Tariff program.

The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler. Noes: None. Absent: None. Abstentions: Woo (non-voting).

7.2. 100% Clean and Renewable Electricity by 2025 Goal

Executive Director Marshall presented a proposed resolution adopting the Community Advisory Committee's recommended 100 percent clean and renewable electricity by 2025 goal that does not interfere with existing Community Choice Energy (CCE) program goals and that incorporates community discussion on definitions of "clean" and "renewable" energy. The resolution accelerates RCEA's existing goal of achieving 100 percent renewable energy by 2030 outlined in the Board-adopted Comprehensive Action Plan for Energy (CAPE), the agency's strategic plan. Staff outlined the resolution's proposed action plan to revise CAPE goals in 2019, align those goals with the County's current multijurisdictional climate action plan (CAP), examine cost impacts of different scenarios, and incorporate the resulting long-

term strategy into an updated integrated resource plan that will be submitted to the California Public Utilities Commission in spring 2020.

The directors and staff discussed: adherence to the CCE program's first five year resource goals; how local biomass will be burned here or elsewhere; the value of locally-produced energy; how staff will encourage a land management, fire safety, carbon sequestration and biomass discussion at the County's CAP public meetings; how the clean and renewable energy discussion must encompass more than electricity production; how all energy sources have negative impacts; and how accelerating the agency's adoption of 100 percent renewable electricity may limit local energy source options given the state's requirement for long-term procurement contracts.

Chair Winkler invited public comment.

Arcata resident and 350 Humboldt member Pat Carr expressed support for the resolution, locally-produced energy and decentralized energy. Ms. Carr stated support for community involvement in clean energy discussions.

Eureka resident, 350 Humboldt Steering Committee member, and Eureka Energy Committee member Debra Dukes read a letter from Gale Coonan supporting the resolution for setting an example for other communities. Ms. Dukes also expressed support for the resolution stating that it may be a small act in the global context, but it makes a big difference for this community.

Member of the public Wendy Ring stated her support for the resolution, describing it as a signal to power providers of the kind of energy people want. Ms. Ring also supported RCEA's coordination with the regional climate action plan and integrated resource plan, the agency's community responsiveness and incorporation of further avenues for community dialog.

Member of the public Ellen Golla expressed support of the resolution with reservations and stated that she hoped it would not be used to greenwash biomass electricity, which she states is not clean. Ms. Golla cited a recent American Public Health Association report stating that combustion-related air pollution negatively affects children's neurodevelopment.

DG Fairhaven General Manager Bob Marino expressed support for the resolution and shared a report on biomass by the California Air Pollution Control Officers Association.

Humboldt Redwood Company (HRC) Scotia Director of Operations Michael Richardson read HRC Forest Policy Director John Andersen's letter urging the Directors to continue to include biomass facilities as a clean and renewable source of energy and stating that the Scotia plant burns waste from trees harvested following stringent forest practice rules. Mr. Andersen added that HRC provides well-paying jobs to 300 employees who support the local economy.

Tyler Chapman of Lost Coast Energy stated that he supports the resolution and that by enforcing the state's energy code, the community can immediately take steps toward achieving emissions reduction goals.

Chair Winkler closed public comment.

M/S: Allison, Daugherty: Adopt Resolution 2019-1 of the Board of Directors of the Redwood Coast Energy Authority Adopting the Target of a 100% Clean and Renewable Electricity Mix by 2025.

The motion passed on a unanimous voice vote. Ayes: Allison, Daugherty, Fennell, Glaser, Miller, Smith, Wilson, Winkler. Noes: None. Absent: None. Abstentions: Woo (non-voting).

END OF COMMUNITY CHOICE ENERGY (CCE) BUSINESS

STAFF REPORTS

Director Allison leaves at 6:26 p.m.

9.1. Community Choice Energy Program Update by Power Resources Director Richard Engel.

Power Resources Director Richard Engel reported that a diverse group of renewable power producers responded to February's request for proposals. Most were solar developers, some were hydropower and wind power producers, and most were from outside Humboldt County. The review team is assessing the proposals and staff's goal is to present negotiated power purchase agreements for Board approval in July.

The CCE program's electricity rate changes continue to be delayed by PG&E's delayed rate setting. Staff anticipates a decrease in PG&E generation rates in May at the earliest and is delaying implementation of the Board-approved one percent rate discount below PG&E's rates. RCEA's required rate comparison mailing is due this summer and may not reflect changes in PG&E's and RCEA's rates due to the delays.

Upon inquiry by Director Miller, staff confirmed that it may be possible to increase the rate discount to more than one percent below PG&E's generation rates, once the changes to PG&E generation rates and the Power Charge Indifference Adjustment are known.

9.2. Building Lease Renewal Report by Operations Director Dana Boudreau.

Operations Director Dana Boudreau reported that RCEA's building lease expires at the end of March and that staff and the building owner agreed to a month-to-month lease. Building improvements for comfort and efficiency are being discussed and staff favors remaining at the current location to keep expenses down. One-year lease negotiations will begin in June.

To Director Glaser's inquiry whether staff is looking for another location to accommodate increased staff for proposed projects, staff Director Boudreau responded that staff continues to consider other locations and building sharing with other agencies as longer-term solutions.

Chair Winkler adjourned the meeting at 6:35 p.m.

Respectfully Submitted,
Lori Taketa
Clerk of the Board



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REDWOOD REGION ECONOMIC DEVELOPMENT COMMISSION

Regular meeting of the Board of Directors

At the Prosperity Center 520 E Street, Eureka

April 22, 2019 at 6:30 pm

AGENDA

- I. **Call to Order & Flag Salute**
- II. **Approval of Agenda and Minutes**
 - A. Approval of Agenda for April 22, 2019
 - B. Approval of Minutes of the Board of Directors Meeting March 25, 2019
- III. **Public Hearing for Draft FY 2019/2020 RREDC Budget**
- IV. **Public Input for non-agenda items**
- V. **Program – Single Use and Packaging Sustainability for Humboldt Industrial Waste Reduction – Linda Wise, General Manager, Recology, Humboldt County**
- VI. **Consent Calendar**
 - A. Acceptance of Agency-wide Financial Reports: March 31, 2019
- VII. **Reports – No Action Required**
 - A. Loan Portfolio Reports: March 2019
 - B. Executive Director's Report
- VIII. **Old Business**
 - A. Approval of RREDC Budget for FY 2019/2020
- IX. **New Business**
 - A. Consideration of Letter Opposing Closure of Commercial Crab Season
 - B. Employee Manual Proposed Changes
 - C. Consideration of Board Members' Mileage Reimbursement
- X. **Member Reports**
- XI. **Agenda/Program Requests for future Board of Directors Meetings**
- 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.

**RREDC
 Member
 Agencies**

Cities Arcata · Blue Lake · Eureka · Ferndale · Fortuna · Rio Dell · Trinidad
 Community Services Districts Humboldt · Manila · McKinleyville · Orick · Orleans · Redway · Willow Creek
 Humboldt Bay Harbor, Recreation and Conservation District · Humboldt Bay Municipal Water District
 County of Humboldt · Hoopa Valley Tribe · Redwoods Community College District