

Humboldt Bay Municipal Water District
828 7th Street, Eureka



**Agenda for the Special Meeting of the
Board of Directors**

Meeting Start Time: 9:00 a.m.

**DUE TO COVID-19 THE DISTRICT WILL BE
HOLDING THE MEETING VIA ZOOM**

May 20, 2021

District Mission

Reliably deliver high quality drinking water to the communities and customers we serve in the greater Humboldt Bay Area at a reasonable cost. Reliably deliver untreated water to our wholesale industrial customer(s) at a reasonable cost. Protect the long-term water supply and water quality interests of the District in the Mad River watershed.

COVID-19 Notice

Consistent with Executive Orders N-25-20 and N-29-20 from the Executive Department of the State of California and the Humboldt County Public Health Officer’s November 3, 2020 Shelter-in-Place Order, the Board members will be participating via Zoom. The Board room at 828 7th street will be open to the public and social distancing and wearing of face coverings will be enforced.

Members of the public may also join the meeting online at:

<https://us02web.zoom.us/j/82012249027?pwd=bkFLanQycU1IT0hHaXZUYjIGMkZtdz09>

Participate by phone: 1-669-900-9128

Enter meeting ID: 820 1224 9027

Enter password: 743906

If you are participating via phone and would like to comment, please press *9 to raise your hand.

How to Submit Public Comment: Members of the public may provide public comment via email until 5 pm. the day before the Board Meeting by sending comments to the Board Secretary at hbitner@hbmwd.com. Email comments must identify the agenda item in the subject line of the email. Written comments may also be mailed to 828 7th Street, Eureka, CA 95501. Written comments should identify the agenda item number. Comments received prior to the meeting will be read during the meeting. Comments received after the deadline will be included in the record but not read during the meeting. If participating in the meeting, public comment will also be received during the meeting.

Time Set Items:

Item	
5.1d	Disaster Declaration at Ruth Lake 9:05 am

1. ROLL CALL

2. FLAG SALUTE

3. ACCEPT AGENDA

4. PUBLIC COMMENT

Members of the public are invited to address the Board on items not listed on the agenda that are within the scope and jurisdiction of the District. At the discretion of the President, comments may be limited to three minutes per person. The public will be given the opportunity to address items that are on the agenda at the time the Board takes up that item. Pursuant to the Brown Act, the Board may not take action on any item that does not appear on the agenda.

5. CONTINUING BUSINESS (Time set at 9:05am)

5.1 Disaster Declaration at Ruth Lake update – discuss

5.2 R.W. Matthews Dam Spillway Retrofit Hazard Mitigation Advance Assistance Grant Program sub application funding match letter – discuss and possibly approve*

6. FY 2021/22 Project Budget

6.1 Presentation and discussion of proposed Project Budget (summary and line-item detail) - discuss*

ADJOURNMENT

ADA compliance statement: In compliance with the Americans with Disability Act, if you need special assistance to participate in this meeting, please contact the District office at (707) 443-5018. Notification 48 hours prior to the meeting will enable the District to make reasonable arrangements to ensure accessibility to this meeting.

(Posted and mailed May 14, 2021)



HUMBOLDT BAY MUNICIPAL WATER DISTRICT

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BOARD OF DIRECTORS

SHERI WOO, PRESIDENT

NEAL LATT, VICE-PRESIDENT

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GENERAL MANAGER

JOHN FRIEDENBACH

April 29, 2021

California Governor's Office of Emergency Services
Hazard Mitigation Grants Program Unit
3650 Schriever Avenue
Mather, CA 95655

Re: DR 4569, Control # 0538 – Humboldt Bay Municipal Water District Advance Assistance Matthews Dam and Spillway Seismic Stability Analysis and Design Subapplication Funding Match Commitment Letter

Dear State Hazard Mitigation Officer:

As part of the Advance Assistance Hazard Mitigation Grant Program process, a local funding match of at least 25% is required. This letter serves as Humboldt Bay Municipal Water District's (HBMWD) commitment to meet the local match fund requirements for the Hazard Mitigation Grant Program.

SOURCE OF NON-FEDERAL FUNDS: Local Agency Funding

NAME OF FUNDING SOURCE: HBMWD Water Rates

FUNDS AVAILABILITY DATE: April 29, 2021

FEDERAL SHARE AMOUNT REQUESTED: \$1,153,462

LOCAL SHARE AMOUNT MATCH: \$384,488

FUNDING TYPE: Cash from municipal customer water rates

If additional federal funds are requested, an additional local match fund commitment letter will be required. Kindly contact Chris Harris, Business Manager, at 707-443-5018 or harris@hbmwd.com if you have any questions.

Respectfully,

A handwritten signature in blue ink that reads "John Friedenbach".

John Friedenbach
General Manager

Color Coding for Project Budget

Blue - Recurring Projects

Purple - Essex Driven Projects

Red - Regulatory Required Project

Green - Grant Funded or Main Office Driven Projects

Orange - CIP Project

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
FY2021/22 Project Budget

6	A B		D			H			I			J			K			L			M			N			O		P		Q		R		T		
	CATEGORY, LOCATION, PROJECT NUMBER & TITLE					PROJECT EXPENDITURES THIS FY			PROCEEDS FOR PROJECTS						ADDITIONAL CHARGES		Resulting Customer Charges		2020/21		PROJECT DESCRIPTION																
7			Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service																										
8	Maintenance																																				
9	Essex Area Maintenance																																				
10	M1		Pipeline Maintenance		14,000	14,000																													ANNUAL PROJECT: Routine annual maintenance to include re-establishing access to the right-of-way, minor grading, sign replacement, and equipment maintenance.		
11	M2		12 kV Electric System Maintenance		4,200	4,200																													ANNUAL PROJECT: Required to inspect, clean, maintain, and ensure the safe operation of the existing 12kV system which supports the Domestic Water System, Industrial Water System, and the Control Center at Essex.		
12	M3		Main Line Meter Flow Calibration		14,000	14,000																													ANNUAL PROJECT: The District uses a five-year cycle for mainline meter maintenance. This year, the Fieldbrook meter is due for maintenance. The meter will be removed for calibration during the winter months.		
13	M4		Technical Support and Software Updates to Include Control System		27,000	27,000																													ANNUAL PROJECT: This is a yearly allocated expense for technical support and licensing on an as needed basis: 1) Rockwell Automation ; 2) ESRI GIS; 3) IMSI CAD; 4)Microsoft software; 6) Firewall software;7) Phone system support; 8) Antivirus software; 9) Datto Backup service		
14	M5		Generator Services		3,500	3,500																													ANNUAL PROJECT: Routine service on 2MW and 35kw emergency generators.		
15	M7		Hazard & Diseased Tree Removal		8,000	8,000																													ANNUAL PROJECT: Required to remove hazardous trees in the Essex parks.		
16	M8		Cathodic Protection		6,500	6,500																													ANNUAL PROJECT: To inspect and perform minor maintenance on cathodic protection system.		
17	M9		Maintenance Emergency Repairs		50,000	50,000																													ANNUAL PROJECT: Funding for unforeseen maintenance, unplanned replacements, and emergency repairs.		
18	M10		Fleet Paint Repairs		5,000	5,000																													ANNUAL PROJECT: This project continues preventive maintenance to preserve our equipment to prolong assets useful life.		
19			Particle Counter Calibration		1,250	1,250																													This is a regulatory required analytical instrument which requires factory calibration every two years. Charge is service, minor parts and shipping, major parts, if required, are additional. Last calibrated 2019.		
20			Replace Collector 4 Cable		8,250	8,250																													This project proposes the replacement of the cable supporting the car cable for Collector 4. This cable is developing some deformed areas that are creating a potentially hazardous situation with the slipping of the cable car puller putting employees at risk for injury.		
21			Cyber Assessment		19,250	19,250																														The purpose of this projects is to get a base line of our cybersecurity vulnerabilities at the Essex location. We will hire a third party to do a cybersecurity assessment of the administration and control networks. This will include assessments of our remote connections into our control networks. We will use the results of this assessment to develop a project for the corrective measures. The Eureka Office will also need a similar assessment, but is not funded here.	
22			Power Pole/Line Inspection/Maintenance		17,500	17,500																													CIP - Related: This project is a multi year CIP project to go through the entire 12 kV system. This project will provide funding to hire a contractor to perform pole coring inspections while also inspecting, cleaning, and maintaining the pole top equipment and wiring on the 12KV overhead electrical system, which powers our collectors.		
23			Collector MCC Breaker and Door Switch Replacement		73,000	73,000																														This project will replace the breakers in all four collector motor starter panels and repair the breaker control door switches for our eight - 400 Hp pumps. These are the oldest parts of the motor starter control panels. These breakers are now obsolete and were not upgraded when the soft starters were installed in FY08 and FY09 and were at least 15 years old at that time.	
24			Upgrade Microsoft Office package at Essex		1,250	1,250																														This project is for the installation of Office 2019 on two administrative laptops. This may be the last stand alone office suite by Microsoft. We are using Office 2010 Pro since 2011. Microsoft will cease support for Office 2010 later this year. Without this upgrade, we may have security issues in the future, particularly with e-mail.	
25			Security Fencing Replacements at Essex and Samoa BPS		93,000	93,000																														This project will replace the security fencing at both the perimeter of Samoa booster pump station and at Essex. The new fencing at Essex will be installed starting at the end of the new fencing from the 12KV Switchgear Relocation Project and extending to the end of the lower yard below Line Sheds 7 and 8. The previous fencing below the line sheds was completely removed due to unrepairable damage and decay. These existing sections of fencing are deteriorating. This project will also modify the design at the Samoa locations to make it easier to maintain and preserve the fence in the future by keeping the sand from being able to contact the fence post bases, and make the posts changeable without the need for pulling and repouring concrete.	

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
FY2021/22 Project Budget

	A	B	D	H	I	J	K	L	M	N	O	P	Q	R	T
6	CATEGORY, LOCATION, PROJECT NUMBER & TITLE			PROJECT EXPENDITURES THIS FY			PROCEEDS FOR PROJECTS				ADDITIONAL CHARGES		Resulting Customer Charges	2020/21	PROJECT DESCRIPTION
7				Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service		Prior Year Budget Amount	
26			Lighting Upgrades for Essex Shop, Collectors and Line Sheds		9,750	9,750							9,750	0	This project will retrofit and or replace current lighting in various locations in the District to energy efficient LED lighting
27			Collector 1 Interior Painting		41,750	41,750							41,750	0	Since all major construction projects are completed on Collector 1, this collector now ready for a complete interior painting including both decks, ceilings, walls, floors, and piping manifolds. This project is to have a painting contractor perform the necessary preparation and paint work to the complete interior of Collector 1. This is the last phase of the rehabilitation of Collector 1.
28	TRF Maintenance														
29	M6		TRF Generator Service	500		500							500	500	ANNUAL PROJECT: Routine service on Korblex emergency generator.
30			TRF Limatorque Valve Retrofit Supplies	14,500		14,500							14,500	10,250	This reoccurring budget item is for the purchase of additional Limatorque Valve Actuator Retrofit Kits and spare parts for the TRF valves. It is essential that we maintain sufficient inventory of spare parts and actuators while we are phasing out the Limatorque Actuators.
31			Replace One WWR Pump P551 VFD	5,750		5,750							5,750	0	This project will purchase a replacement Allen Bradley VFD Flex 400 Frequency drive for the WWR pump P-551. It has begun to induce noise on to the grounding system and is causing failures on the Limatorque valve network while it is running. This is the original drive and will be replaced with a like kind drive as is currently installed in WWR P-552.
32			TRF Sludge Bed Gutter Replacement	10,000		10,000							10,000	0	This project will replace the gutters, downspouts and drains on the rear of the TRF sludge beds. This will improve runoff collection and diversion away from slope above 1MG Reservoir. The current gutters are failing and the downspouts and drains are not sufficient enough to handle the water load from the roof. The center drain is creating an erosion issue by removing material from the slope on the bank behind the 1MG DW Reservoir.
33			TRF Process Pumps	3,000		3,000							3,000	0	This project is to purchase spare rebuild/service kits for our bigger process pumps (WWR, Sludge & Sample Sump). These kits get consumed periodically and having spares available for emergency purposes is critical for rebuild time turnaround.
34			TRF Instrumentation Replacement	15,750		15,750							15,750	0	CIP - Related: This project is to purchase, install, and test one new style turbidimeter to determine if this particular product will have the same reliability but a with a lower cost of operations when compared to our current units. This will allow the testing on one unit before purchasing new ones for all of the locations in the TRF. This project will also include purchasing spare pressure transducers for TRF filter level indications
35			TRF Valve Network Upgrade (Phase 1 of 5)	15,750		15,750							15,750	0	CIP - Related: This project will purchase, install and test a new type of valve actuator at the TRF. This trial is essential before proceeding with the complete network valve actuator replacement project. Our current actuators cost between \$10,000-\$15,000 annually to maintain and retrofit. Our current actuators are beginning the third generation of retrofitting for these valves. It is in the District's best financial interest to have fully vetted a prospective replacement for compatibility and reliability in order to ensure lower maintenance costs in the future.
36	Ruth Area Maintenance														
37	RM1		Brush Abatement Ruth Hydro		6,500	6,500							6,500	6,500	ANNUAL PROJECT: Dam-safety related; FERC and DSOD require that we remove or kill trees and brush to prevent the root systems of the trees from damaging the face of the Dam. It is essential to keep earth-fill dams clear of such growth so that root systems do not weaken the impervious clay core.
38	RM2		Howell Bunger Valve Inspection		1,000	1,000							1,000	1,110	ANNUAL PROJECT: District staff inspect the Howell Bunger Valve to determine maintenance, repairs or replacement are required. This is an essential component to operate the Hydro Plant at Ruth Lake.
39			LTO Insurance		5,000	5,000							5,000	5,000	ANNUAL PROJECT: This project purchases insurance for our LTO for tree management on lease lots and general timber management.
40			Log Boom Inspection		1,500	1,500							1,500	1,000	ANNUAL PROJECT: This project is for boat rental, materials and parts as needed, to maintain the Worthington Log Boom at Ruth. This is an essential safety feature of the dam.
41			Spillway Repairs		15,000	15,000							15,000	0	Based on recent spillway inspection results, there are areas of potential delamination that need to be uncovered and repaired. These repairs are essential to maintain the integrity of the spillway. The District has had great success in the past repairing these delamination areas.
42			Ruth Logboom Interconnection Plates		16,500	16,500							16,500	0	This project is to purchase and install replacement log-boom interconnection plates on the Worthington Log Boom. This installation will require removing sections of the log-boom and taking them ashore to remove the lower screens and install the new anchor plates, and reinstalling the screens and lower screen chains.

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
FY2021/22 Project Budget

A		B		D			H	I	J	K	L	M	N	O	P	Q	R	T
CATEGORY, LOCATION, PROJECT NUMBER & TITLE				PROJECT EXPENDITURES THIS FY			PROCEEDS FOR PROJECTS				ADDITIONAL CHARGES		Resulting Customer Charges	2020/21 Prior Year Budget Amount	PROJECT DESCRIPTION			
Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service	Resulting Customer Charges	2020/21 Prior Year Budget Amount								
43			Woody Debris Removal		30,000	30,000									30,000	0	Due to the devastation caused to the Ruth Lake area and the Upper Mad River Watershed, there is significant woody debris that flows into the lake. This project will fund either hired part-time helpers or contract labor (CCC for example) to assist with the removal of this debris. Also included in this project is boat rental to shuttle both workers and debris back/forth across the lake. This project would occur once the lake level is at its lowest.	
44			Lease Lots Surveys		25,000	25,000									25,000	0	As a result of the August Complex Wildfire devastation to lease lot structures as well as District salvage logging operations, many, if not all of the lease lot property line references no longer exist. In order to facilitate the orderly and accurate reconstruction of structures- (dwellings, out buildings, septic systems, water systems), certain areas requires professional surveying to establish the lease lot boundaries on District property.	
45	Eureka Office Maintenance																	
46	Subtotal Maintenance Projects			65,250	497,700	562,950	0	0	0	0	0	0	0	0	562,950	141,610		
47	CAPITAL PROJECTS																	
48	Essex Area Capital Proj.																	
49	C1		Ranney Collector 3 and Techite Pipeline Projects - Debt Service		81,100	81,100								81,100	81,100	162,200	CIP - Related: Debt Service for the Ranney Collector 3 and Techite Pipeline projects. Funding- US Bank loan amount was \$1,418,000 for both projects. Financed for 10 years at 2.63% interest with debt service of \$162,200/year. First debt service payment made in 11/12, the last payment is on September 1, 2021. (Final Payment)	
50	C1		Professional Services for New Capital Debt		81,100	81,100								0	81,100	0	With the current low interest rate market conditions, this project would provide for a financing consultant and bond counsel to begin exploring and pursue long term financing options for CalPERS UAL, OPEB Liability, and CIP Projects.	
51			12KV Grant (FY20/21)		3,023,328	3,023,328	763,000	2,260,328							0	0	This project will relocate the 12KV Switchgear from the side of the shop building up to Railroad Grade (Annie-Mary Trail), and out of the floodplain. It is largely funded by a FEMA Hazard Mitigation Grant. This project will be completed March 2022. Anticipated Project total is \$3,023,000 - HMG funding is 75% or \$2.2M, remaining District portion is \$756,000.	
52			Collector Mainline Redundancy Project (\$3.1M FY 23)	95,000	95,000	190,000	150,000						40,000		40,000	50,000	This project will provide a redundant pipeline to convey water from the District's collectors to the TRF. There is currently only one water line that conveys the water from all of the District's collectors to the TRF for treatment, storage, and distribution to customers. Failure of this source water supply line would mean total failure of the HBMWD system. Repair of the collector mainline would be very difficult, as it travels along a steep and narrow road, and failure of the pipe would likely cause significant erosion of the hillside and roadway creating costly and time-consuming repairs. Currently in the approval process for FEMA Hazard Mitigation Grant funding, construction is anticipated in FY22/23. Project total is currently budgeted at \$3,100,000 with a District match of \$775,000.	
53			Collector 2 Rehabilitation (Project \$1.6M - FY22)		1,600,000	1,600,000	825,000	600,000					0		175,000	200,000	This project will begin the rehabilitation of Collector 2. This will include the design/engineering/replacement of the laterals. Engineering was started in FY21 and construction will likely begin in FY22. The project is currently estimated at \$1,658,000 and has received NCRP Prop. 1 grant funding of \$600,000, and Advanced Charges collected of \$825,000 leaving a District balance of \$175,000.	
54			3x Tank Seismic Retro Grant (Project \$3.5M - FY22)		3,500,000	3,500,000	875,000	2,625,000					0		0	200,000	This project will provide a Seismic Retrofit for all three storage reservoirs (1MG and 2MG at TRF, and 1MG Industrial). This will bring all three reservoirs up to the current seismic code. Currently in the approval process for FEMA Hazard Mitigation Grant funding, construction is anticipated in FY22. Project total is currently budgeted at \$3,500,000 with a District match of \$875,000.	
55			Cathodic Protection Project (\$405,000 - FY22)		125,000	125,000	100,000						25,000		25,000	100,000	CIP - Related: Cathodic protection is a form of corrosion control commonly used to mitigate external corrosion on buried pipelines. Impressed Current Cathodic Protection (ICCP) is a type of cathodic protection relying on an external power source: AC power which is converted to DC by a rectifier. DC current is sourced through the soil via buried anodes to the project pipeline(s). There are typically several anodes associated with a single rectifier that may be buried in various configurations or arrays; including installation of multiple anodes in a vertical column as a part of a shallow anode well array or a deep anode well. HBMWD has an ICCP system dedicated to the DW pipelines; composed of five (5) rectifiers and associated anode beds. The CP system components are aging, and in some cases are estimated to have been in service for 30 or more years. The CP systems have been maintained by HBMWD staff and periodic system surveys have been conducted by a specialized Contractor retained by the District. Of the five District Rectifiers, two (the Jackson Ranch and Jane's Creek), were found to not be functioning at the time of assessment.	
56			On Site Generation of Chlorine, Phase 2 (\$850,000 - FY22)	850,000		850,000	796,193						53,807		53,807	80,000	To eliminate the high risk hazard of Chlorine Gas at Essex, this project replaces our current Chlorination system with a Chlorine gas generator. This is a much safer process than the District currently uses. Chlorine generation is a very low concentration process therefore, it is not considered a hazardous product with far less regulation. There will be no need for our SCBA PPE. The District has collected advanced funding as well as reallocation funding for this project.	
57			Power and Fiber Optic Link to Collector 2, Phase 2		44,000	44,000									44,000	65,000	Phase 2 of this project is for the purchase of conduit, trenching, and pull boxes to begin the underground 12KV electrical feed and new fiber optic cable from Essex to Collector 2. The goal of this project would be to eliminate the vulnerability of relying on overhead power transmission lines and would establish a separate breaker feed to Collector 2. A fiber optic link is also part of the project to further harden communications, and control reliability.	
58			Line Shed #8		61,750	61,750									61,750		This proposed line shed for the storage and weather protection of the District's mobile equipment, such as Vac trailer, Chipper, JD60G Excavator, and JD4052R mower. Currently this equipment is parked outside and is subject to weather and vandalism.	

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
FY2021/22 Project Budget

6	A	B	D	PROJECT EXPENDITURES THIS FY			PROCEEDS FOR PROJECTS				ADDITIONAL CHARGES		Q	R		T
				H	I	J	K	L	M	N	O	P		2020/21	Prior Year Budget Amount	
7	CATEGORY, LOCATION, PROJECT NUMBER & TITLE			Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service	Resulting Customer Charges	PROJECT DESCRIPTION		
59			Essex Control Building Expansion		0	0							0			CIP - Related: This project remodels and expands the current Essex breakroom, incorporates a new Customer Service office, Training facility and ADA restrooms. The project has not been budgeted at this time, but is listed for discussion purposes. (\$500,000)
60			Essex Control Building Expansion Plans and Specifications		0	0							0			CIP - Related: The Essex Control Building Expansion is included in the CIP for the 2018/19 Fiscal Year. In 2006/07, Martha Jain Architect worked on concept level plans for the expansion of the Essex Operations Building. This scope would include finalizing the plans with the assumption that they would be developed to sufficient detail to allow the project to go out to competitive bid for construction. GHD would work with Martha Jain Architect to finalize the plan sheets and details as well as completing structural evaluation design and details for the building expansion. Plan sheets will also be developed for electrical and plumbing plans. Project specifications and bid forms will also be developed. The budget below assumes that minimal (8 hrs.) of electrical engineering is required to re-design the electrical feed from Pump Station 6 that comes into the west side of the existing control building. The project has not been budgeted at this time, but is listed for discussion purposes. (\$46,000)
61	TRF Capital Proj.															
62			TRF Emergency Generator (Project \$1.9M - FY23)	375,000		375,000	300,000				75,000		75,000	25,000		This project will continue Advance Charges to install a larger Emergency Generator at the TRF to power the facility at full functionality. The current generator is not large enough to operate all of the components of the facility at the same time. Currently in the approval process for FEMA Hazard Mitigation Grant funding, construction is anticipated in FY23. Project total is currently budgeted at \$1,925,000 with a District match of \$500,000.
63			Emergency EOC at TRF		0	0							0			CIP - Related: This is a CIP project to provide a larger EOC and multi-function building at the TRF. See Engineering budget below. The project has not been budgeted at this time, but is listed for discussion purposes. (\$1,650,000)
64			Emergency EOC at TRF (Engineering)		0	0							0			CIP - Related: At some point in the future, the District is considering constructing an emergency operations center (EOC) at the Turbidity Reduction Facility (TRF) to maintain operations in the event of a dam break or extreme flood event. Additionally, due to the recent COVID pandemic, operations staff have been split between Essex and the TRF to maintain social distancing, and a more complete operations center at the TRF would improve operating efficiency. The existing control room at the TRF accommodates only 2 or 3 people, and is not optimal. It may also be prudent to relocate the District's main SCADA system to the TRF, away from the Mad River floodplain at Essex, and out of the dam break inundation zone. An EOC constructed at the TRF would accommodate the SCADA servers, etc. as well as provide telephone, computers, room for personnel to operate during an emergency, and potentially extra space for hosting meetings/trainings. This project is included in the District's CIP, but it will not likely be moved forward this year. The budgetary figure provided below includes the cost for a geotechnical investigation, surveying, engineering design, environmental permitting, and construction management. This figure was developed in 2016 based on a high-level analysis, and it is possible that additional budget may be required. A more detailed budget estimate will need to be determined prior to moving this project forward. The project has not been budgeted at this time, but is listed for discussion purposes. (\$261,000)
65			TRF Filter Building, Mezzanine EOC	10,750		10,750							10,750	0		This project is to construct a room dedicated as a Temporary Emergency Operations Control Center in the TRF Filter Building Mezzanine. This space would be available as an EOC until the 2-story EOC building is constructed. This area has currently been dedicated as an area to set up a EOC. but lacks isolation from the rest of the appurtenances located in the building. When not being used as an EOC, this room would also serve as an office and breakroom and would be available to store critical EOC supplies.
66			TRF Line Shed 5 Ramp and Concrete Work	2,000		2,000							2,000	0		This project is to form a concrete approach ramp to allow forklift access into this shed to store materials within. Along with the ramp, asphalt work around the Line Shed and chemical containment area will also be completed to help deflect rain water from pooling.
67	Eureka Office Capital Proj.															
68			Solar at Eureka Main Office		30,000	30,000							30,000			This project is to install solar panels at the Eureka main office as well as vehicle charging station(s). Based on current regulatory requirements, the District will be required to convert the District fleet to EV (Electric Vehicles) by 2027. The installation of solar panels and vehicle charging station(s) is the first step in this process.
69	Ruth Area Capital Proj.															
70																
71			CalFire Fuel Reduction Contract		50,000	50,000							50,000			In October 2020, the Board approved a policy to create Defensible Space on the Ruth Lake lease lots. These funds will allow the District to begin that process.
72	Subtotal Capital Projects			1,332,750	8,691,278	10,024,028	3,809,193	5,485,328	0	0	193,807	81,100	729,507	882,200		

HUMBOLDT BAY MUNICIPAL WATER DISTRICT
FY2021/22 Project Budget

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7				Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service		Prior Year Budget Amount	
73	Equipment/Fixed Assets														
74	Essex Area Equipment/Fixed														
75			Replace Administrative Computers		6,300	6,300							6,300	6,250	Annually replace two oldest workstations in the administration network with new computers including peripherals, printers and monitors. Also maintain software security at the highest levels currently available.
76			Replace 1 of 3 Essex Admin Servers		11,000	11,000							11,000		This project replaces 1 (of 3) of the existing Essex admin servers. The current server is 9 years old and the server operating system is no longer supported.
77			Collector Lube Oil Detection System		8,250	8,250							8,250		This project will purchase and install an oil flow detection system for all of the collector pump lubrication systems. This will provide for the continuous monitoring of the lubricant flow on each pump during its running state to insure continuous lubrication and to create an alarm condition on SCADA in the event of a failure of this equipment.
78			500 GB USB drives for External Backups		2,000	2,000							2,000		This project will begin creating external annual backups of the District's 15 main servers at Essex. This will be accomplished by copying the Datto image of a full backup to a USB drive. With this method we will be able to maintain backup for extended periods beyond the 1 year Datto maintains.
79			Replace Unit 9		82,000	82,000							82,000		CIP - Related: This project is for the replacement of Unit 9 as part of the Capital Improvement Plan. This fleet vehicle was the Maintenance Supervisor truck from 2002-2018 when it was shifted to function as a utility vehicle position. This truck is and has been an important asset due to its ability to maneuver on the beach and provide material support to jobsites where maneuverability is an important factor. The new proposed vehicle will be a regular cab truck with a dumping flat bed to help it best serve both situations. The size and configuration of the new truck, including the diesel engine with exhaust brake coupled with a ten speed transmission, will be very well suited for towing an equipment trailer with our smaller tractor/mower.
80			Hydraulic Oil Filtering Cart		3,750	3,750							3,750		This project will purchase a hydraulic oil filtering system to be used at Essex and at Ruth for the maintenance of hydraulic systems in both locations. The current system is old and parts and filters are becoming difficult to find and the unit is of limited capacity. The new system will be more robust with a two stage filtration system and a 10/gpm filtering flow rate and currently has excellent availability for parts and filters. This will extend the useful life of District assets.
81			Tools and Storage For Electrical and Maintenance Shops and Service Trucks		5,000	5,000							5,000		This project is for additional battery powered tools, fabrication and general hand tools that the District does not currently own. These additional tools are necessary for crews working both in the shop and out in the field, including the penstock at the dam. This project also includes ruggedized storage boxes for tools and supplies for both service trucks (units 4 & 8) to improve organization and efficiency.
82			Backflow Test Kit		1,500	1,500							1,500		This purchase replaces our aging backflow tester with a new modern backflow test kit. The District intends to also retain the current backflow test kit as a back-up unit until it ceases to function. This will also allow the District to have two backflow testers in the field simultaneously to test backflows.
83			Unit 5 Truck Upgrades		2,250	2,250							2,250		This project is to purchase of high density outrigger pads and supplemental driving and work lighting for the crane truck to increase utility.
84			Portable Chlorination Dosing Skid		11,750	11,750							11,750		This project is to purchase a portable chlorine dosing skid for hypo chlorinating pipelines after installation or emergency repairs. Before putting pipelines back in service after an uncontrolled de-watering event (a major leak), per state AWWA standards, the pipeline must be disinfected with hypochlorite.
85	TRF Equipment/Fixed Assets														
86			Drum Handling Equipment	2,000		2,000							2,000		This project is for drum handling equipment that will be used to drain and wash-out TRF chemical barrels. The unit will allow a single operator to hoist and rotate a chemical barrel for draining and cleaning. This project will also require a support structure to be built above drying bed 10's underdrain sump.
87			TRF Chemical Building PLC Module Expansion	3,250		3,250							3,250		This project will purchase two Allen Bradley Input/output modules to be installed in the existing Allen Bradley Control Logix PLC I/O rack in the TRF Chemical building to allow for additional control and alarm signaling to be interfaced with the Chemical Building PLC.
88			Replace Alum Pumps	17,250		17,250							17,250		This project will replace the two original Jesco alum pumps at the TRF. These pumps are now twenty years old and they were oversized and were put into a backup role with the addition of pumps P-623 and P-624. They are the last remaining Jesco pumping equipment at the TRF. With the potential addition of a new combination filter and chemical mixture, it will be more efficient to transition to a more suitable pump for the new application. These new pumps will provide better performance while maintaining our dosage requirements for pumping capacities. The District will have the option of choosing from two pump from the Prominent pump line. This will also include the replacement of associated controller and VFD system for control of the pumps.
89	Eureka Office Equipment/Fixed														
90			Replace Administrative Computers		3,500	3,500							3,500	5,500	Administrative computers are replaced on a 5-year cycle. This is for the replacement of the Customer Service Specialist (FY17). The District's computer replacement cycle improves cyber security and employee efficiency.

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6				PROJECT EXPENDITURES THIS FY			PROCEEDS FOR PROJECTS				ADDITIONAL CHARGES		Resulting Customer Charges	2020/21	PROJECT DESCRIPTION			
7				Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service		Prior Year Budget Amount				
91				Ruth Area Equipment/Fixed														
92				Replace Ruth HQ UV Water Treatment System	2,500	2,500									2,500		The Ruth HQ and Bunkhouse UV water disinfection system was put into service approximately 20yrs ago. Based on experience after the fire, parts are scarce for the current system. This project will replace it with a modern unit that UV bulbs and bulb sleeves are readily available.	
93				Purchase Portable Radios for Ruth	2,250	2,250									2,250		This project will purchase three new XPR 3000e Motorola portable radios for Ruth Area Representative and the two part-time relief operators. It was discovered last year during the August Complex Wildfire that the previous (older) radios did not function adequately, leaving District staff unable to communicate. Since that time, two radios were loaned from Essex to use up at Ruth. These radio's have shown to be effective and useful in the Ruth area. This project will provide three radios for the Ruth area and will bring all of the District's portable radios to optimal functionality.	
94				Penstock Ventilation System	4,250	4,250									4,250		This project is to purchase and install a permanent ventilation fan system on the vent line running from the dam slide gate hydraulic pump room at top of dam to the slide gate cylinder room at bottom of lake. During the annual penstock inspection during May maintenance, staff connects a fan onto the discharge vent on the top of the building via a collapsible blower hose. This is done to help increase the natural chimney affect of the penstock and insure that sufficient air circulation is maintained during any penstock work. This new ventilation fan and ducting system that would be permanently installed in the slide gate room and run electrically from the rooms electrical service. This will eliminate the need to run a gas powered fan and use of the ventilation hose for the confined space operation improving worker safety.	
95				Utility Work, Inspection and Response Boat	81,750	81,750									81,750		The project is to purchase an all aluminum work boat with a landing craft front end design for use on Ruth Lake to inspect, maintain, and work on the log boom, intake structure and spillway. It will also serve as a response vessel to emergencies such as a log boom break, debris removal from the log boom and/or a spill event in reservoir. Currently all access to District property on the west side of the lake is via vehicle and hiking. Due to the steepness of the terrain, as well as other safety issues, there is very limited inspection, monitoring, and maintaining of District property on this side of the lake. Since much of the District property is closer to the lake, traversing private property and USFS land to get to District property is common. During the Fire Recovery efforts, multiple issues including but not limited to, incursion onto District property by illegal pot farms and structures, questionable water diversion from District property, were discovered. This boat will also provide a means to monitor and maintain lease property access around lake for inspections. This will also facilitate debris removal clean-up along the lake on a regular basis.	
96				Subtotal Equipment/Fixed Assets	22,500	228,050	250,550	0	0	0	0	0	0	0	0	250,550	11,750	
97				Professional and Consulting Services														
98				Crane Testing/Certification		10,000	10,000									10,000	7,500	ANNUAL PROJECT: Every four years the District is required to test the crane load to comply with OSHA-safety requirements. Each crane must be certified by a licensed contractor in accordance with OSHA regulations. This will also dielectric test the Altec boom truck and certify boom truck operators.
99				Chlorine System Maintenance	16,750	16,750									16,750	16,100	ANNUAL PROJECT: Although the chlorine system is well maintained by District staff, each year we contract for review/repair/replacement of the more complex elements of the system to assure proper operation and safety.	
100				Backflow Tester Training		3,000	3,000								3,000	3,000	ANNUAL PROJECT: Backflow recertification training for the Operations Supervisor This will be far less expensive if we can get the trainer to return to Humboldt County. Otherwise, staff must go out of the area for the training. Regulatory Requirement.	
101				Hydro Plant Annual Electrical and Maintenance Inspection (ReMat Contract)		4,000	4,000								4,000	2,050	ANNUAL PROJECT: Hydro Plant electrical and maintenance inspection letter required annually for the Districts' ReMat Contract	
102				CAISO Meter Inspection Calibration		4,000	4,000								4,000		ReMat required 5 year inspection/ calibration	
103				Crane Operator Re-Certification		21,250	21,250								21,250		This project would send five crane operators to a re-certification training class as well as the crane operator recertification practical test to renew their crane operator certification for 5 years.	
104				ATS Pro-IT Support		23,500	23,500								23,500		This project will provide computer updates and antivirus management for 22 computers on our admin network. This support package also offers employee cybersecurity and phishing annual training. The budget includes a one-time \$3,300 setup fee and \$1,595 recurring monthly charges. (\$19,140 annually).	
105				Essex Mad River Cross-Sectional Survey		12,000	12,000								12,000	10,000	Annual Project: This task consists of the annual field survey of the seven historic cross sections along the Mad River and an update of the AutoCAD figures comparing the new cross sections to the historic cross sections. Two hardcopies of the AutoCAD drawings showing the current elevations of the cross sections in comparison to the last few years will be submitted along with a Technical Memo detailing the recent changes and highlighting any corrective measures that the District may need to implement. Copies of the electronic files in AutoCAD format will also be submitted.	

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				H	I	J	K	L	M	N	O	P		Resulting Customer Charges	2020/21 Prior Year Budget Amount	
7	CATEGORY, LOCATION, PROJECT NUMBER & TITLE			Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service	Resulting Customer Charges	2020/21 Prior Year Budget Amount	PROJECT DESCRIPTION	
106			Technical Training		23,250	23,250							23,250	27,750	<p>Annual Project: This project proposes the funding of software training classes and associated travel expenses for a number of District staff on technologies specific to their job responsibilities. This would include technical training for computer science, computer and SCADA networking programming and software. This recurring budget item enables staff to rotate through trainings that arise throughout the year for the constantly changing technology field. This budgeted amount will include training for approximately five out of seven qualifying employees.</p>	
107			O & M Training		20,000	20,000							20,000	20,000	<p>This budget funds training classes and associated travel expenses for District staff on a variety of specific topics related to their job responsibilities. It also includes some funding for other staff to attend other local training opportunities that may arise throughout the year on water treatment and distribution principles and practices and education for CEU's.</p>	
108			Public Education Funds		5,000	5,000							5,000	5,000	<p>Annual Project: The Board has expressed interest in expanding public outreach for various topics such as water resource planning. This projects provides funding for communications to the public as directed by the Board.</p>	
109			Water Quality Monitoring Plan		30,000	30,000							30,000	0	<p>California Code of Regulations Title 22, Section 64416(a)(4) requires an updated Water Quality Monitoring Plan at least once every 10 years. The District's current plan is due for update. The Waterboard has requested an updated plan from the District. A qualified consultant with experience preparing WQMP's will be selected to prepare the required updated plan.</p>	
110			GIS / FIS Ruth Area, Including Internship		5,000	5,000							5,000		<p>This project is to develop and maintain GIS data collection tools for Ruth's infrastructure. Based on the recent fire recovery activities at Ruth, the District has discovered the current GIS data for the Ruth area is incomplete and inconsistent in areas. Wages for a part-time GIS position are provided for in the SEB, these funds will allow the District to purchase any data sets and mapping needed.</p>	
111			Collector Arc Flash Study Update and Breaker Testing		20,000	20,000							20,000		<p>This project will provide for the updating of the arc flash study for the collectors once new pump control panel breakers are installed and the switch board breakers at collector 1 for pumps 1.3, 1.4 and utility breaker are replaced due to improper fault current ratings. It will also provide for the setting and testing of these breakers based on the findings from the arc flash study. This will give us a completely updated arc flash study and SKM file of our current system.</p>	
112			In-Stream Flow Grant		481,960	481,960		481,960					0	526,700	<p>The In-Stream Flow Grant began in FY19, and work will continue through FY23. This Project is fully grant funded (approved grant \$693,400).</p>	
113			CalFire Forest Health Grant		20,000	20,000							20,000		<p>The District is collaborating with several other entities to work together to reforest Ruth area lands decimated by the August Complex Wildfire. The total grant is estimated to be \$5M, with the District portion (to be used on District property only) is \$2.7M. If awarded, the District match is anticipated to be covered using volunteer labor for in-kind funding. It is anticipated there may be some initial costs associated with support outreach efforts for "Project Seedling" to engage volunteer efforts for replanting fire-ravaged landscape at Ruth Lake for Year 1 of the grant. The District contribution using volunteer labor as in-kind matching from service groups and schools in Humboldt and Trinity counties. Any funding utilized from the requested \$20,000 would be reimbursed by grant funding, but may be needed to support partners' efforts in remote areas, or to pre-purchase supplies for Project Seedling.</p>	
114			Mad River Regulatory Compliance Assistance		50,000	50,000							50,000		<p>This project is included to support regulatory work and possible enforcement activities related to the District's operation on the Mad River. There are four possible activities: 1) Compliance with the terms and conditions of the Long-Term Streambed Alteration Agreement (LTSAA). Section 10.2C requires that the District perform a hydrological and fish passage assessment. The assessment was completed in FY2014/15. Based on the results, Section 10.2D requires that the District and DFW determine and agree upon flow releases from Matthews Dam and bypass flows below Essex. The District may need consulting assistance to negotiate a successful outcome with DFW. (Range of \$10,000 - \$15,000 assumed)</p>	
115				<p>2) Amending the District's HCP to include Eulachon, and supporting NMFS in updating their Biological Opinion (BO) associated with the HCP to address the Critical Habitat Designation (CDH) for Chinook and Steelhead. NMFS addressed CDH for all covered species, but was not able to include that in the BO because the final CHD was not approved at the federal level. A resource consultant will likely be needed to support this work to conduct research, gather available information, and prepare an Environmental Assessment. (Range of \$10,000 - \$15,000 assumed)</p>												
116				<p>3) Enforcement support to the NC Regional Water Quality Control Board, the California Dept of Fish and Wildlife, the County of Humboldt, or other enforcement agencies to address the adverse environmental effects of unpermitted or illegal marijuana grows in the Mad River watershed. The District has pitched the concept of a pilot project in the watershed to curtail activities which are adversely affecting water quality and quantity and causing significant environmental harm. (Range of \$20,000 - \$30,000 assumed)</p>												

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CATEGORY, LOCATION, PROJECT NUMBER & TITLE		Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service	Resulting Customer Charges	Prior Year Budget Amount	
117	Annual Section 115 Pension Trust Contribution		50,000	50,000							50,000	50,000	As approved by the Board in March 2018, this is the annual contribution into the PARS Pension Trust for the Unfunded CalPERS Liability. (This is contribution year four of five).
118	Grant Applications Assistance		20,000	20,000							20,000	20,000	This budget is for potential grant application assistance that the District would require in the upcoming year. Examples of potential grant programs/applications that could be submitted include: Notice of Intent and/or Application for the FEMA Hazard Mitigation Grant (HMG) Program; various programs for the State Proposition 1 funding; as well as DFW, Coastal Conservancy, and the Safe Drinking Water State Revolving Fund programs. The level of effort between these programs is considerably different, and assistance with a detailed application may have to be further negotiated with the District prior to the performance of the work.
119	Inundation Mapping		50,000	50,000							50,000		The District current has three different sets of inundation maps that are required by FERC and DSOD. With the exception of the Spillway Failure Maps, the remaining dam failure Inundation maps are 12-years old. Based on regulatory requirement changes as well as changes in the environment, this project will allow for the Inundation Maps to be reviewed and updated as needed.
120	Collector 4 Restoration		5,000	5,000							5,000		During the winter of 2018/19, the Mad River above Collector 4 was deflected into the left bank by the buildup of a gravel bar on the right bank. The river ended up eroding a large portion of the left bank and exposing the pipeline from the collector. Emergency measures were installed during the winter to stabilize the bank and re-cover the pipeline, and additional measures were installed in the summer to build the gravel pad around the collector and further protect the pipe. There were additional measures in the original design to plant vegetation on the bank to help further protect it and "soften" the rip rap that was installed; however, the regulatory agencies would not permit these measures. FEMA did not provide funding reimbursement for this emergency work. GHD worked with the District to submit an appeal to FEMA's denial of funding. It is possible that a second and potentially a third appeal will be required after FEMA completes their review of the first appeal.
121	Ruth Dam Safety Program												
122	FERC Part 12 - Independent Consultant Inspection and Engineering Support (\$100,000 - FY22)		110,000	110,000							110,000		RECURRING PROJECT (every five years -last one 12/2016; next one FY26/27) FERC requires a comprehensive safety inspection of the dam, spillway and hydro-plant every five years by an approved "Independent Consultant" (pursuant to Part 12D of FERC regulations). The District's Eighth Independent Consultant Inspection was completed December 2016. The Ninth Inspection will be due by December 2021. The Tenth inspection will be due by December 2026 This is advance charges to begin pre-funding this project.
123	FERC Dam Safety Surveillance and Monitoring Report		5,000	5,000							5,000	5,000	ANNUAL PROJECT -This task consists of assisting the District with the preparation of the Annual DSSMR for the R. W. Matthews Dam. This report is submitted to the State Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC). The intent is that the District will do the majority of the report preparation, while GHD will do a review of the active instrumentation, determine whether the monitoring systems in place are adequate, and will do a final review of the overall report after it is assembled by the District, and stamp and certify the Final Report.
124	2 FERC Chief Dam Safety Engineer		12,000	12,000							12,000	10,000	ANNUAL PROJECT - FERC requires the District have a Chief Dam Safety Engineer either on staff or engaged as a consultant. The individual must have substantial experience and knowledge about dam safety. The District has chosen to outsource this function/duty to Bill Rettberg of GEI, Engineering. This project provides for the continuation of these services. As a consequence of the Oroville Dam spillway failure, both FERC and DSOD have intensified their required dam safety program compliance.
125	Dam Spillway Wall Monument Survey		16,000	16,000							16,000	0	RECURRING PROJECT (Annual Crest Monument Survey): This work not required by FERC. District initiated this work given FERC and DSOD questions Re: monitoring of spillway walls. Targets set and baseline established in FY2010/11. New baseline was set in 2020. Due to recent elevation fluctuations in survey data, survey is changing from bi-annual to annual to obtain more timely data to analyze fluctuations.
126	Spillway Repair, Dam Inspection & Reporting Assistance		5,000	5,000							5,000	0	This task, if required, is for assisting the District with recommendations for spillway repairs and reporting of the necessary spillway repairs at Matthews Dam, as well as other inspections and reporting assistance. The 2017 inspection of the spillway found several areas where there appeared to be delamination of the concrete on the spillway floor. Areas of the spillway were repaired in 2017, 2018 and 2019. GHD or GEI will assist the District in the assessment of those repairs after this year's winter, and assist in the reporting and discussions with the State Division of Safety of Dams and the Federal Energy Regulatory Commission. It is difficult to estimate the exact amount of effort required in this year's design and reporting.
127	Adv. Assistance Spillway Seismic Grant (Project \$1.9M - FY24)		25,000	25,000					25,000		25,000		This Advanced Assistance Grant will be used to facilitate feasibility studies and engineering designs that will be used to characterize conditions at the dam and spillway at R.W. Matthews Dam and determine appropriate actions to make the dam and spillway more resilient to natural disasters and mitigate the risk of spillway failure that would subsequently lead to failure of R.W. Matthews dam in its entirety. A 2016 study found that the controlling ground motion for the dam is a M9.2 event on the Cascadia Subduction Zone, resulting in an 84th percentile peak ground acceleration (PGA) of 0.70g. The stability of the dam in response to this seismic event has not yet been analyzed. The engineering studies will be designed to meet current dam safety and seismic standards, and any proposed retrofit designs would be closely reviewed by the State of California Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC). The grant request totaled \$1.9M with a District match of \$475,000

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7	CATEGORY, LOCATION, PROJECT NUMBER & TITLE			Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service	Resulting Customer Charges	2020/21 Prior Year Budget Amount	PROJECT DESCRIPTION
128			Assistance for Assessments of Spillway Drains, Floor and Flip Bucket and Curtain Weir Drain Locating.		120,000	120,000							120,000		There are other studies and assessments that need to occur at Matthews Dam and the spillway that could not be included in the grant applications noted in Item 13 above. These items were not included in the grant applications because they would be considered by FEMA to be repairs of existing old infrastructure, rather than retrofits that improve the level of protection of the system, which makes these items ineligible for the BRIC and HMGP programs. These items include assessments of the weir drains, spillway floor drains, and area under the spillway flip bucket, and effort required to locate the curtain drain weir. These investigations are required by FERC and DSOD.
129	Subtotal Professional & Consulting Services			16,750	1,150,960	1,167,710	0	481,960	0	0	0	0	685,750	703,100	
130	Carryover Projects														
131			Harden Collector 5 (Vandalism & Security)		7,500	7,500							7,500	0	CIP PROJECT: This project will add security measures to Collector 5. This project includes securing the collector doors, ladder access and replacing the plywood cover of the pump ports. This will add a layer of security to the Collector and will replace the rotting plywood with steel.
132	Subtotal Carryover Projects			0	7,500	7,500	0	0	0	0	0	0	7,500	0	
133	Subtotal Project Budget			1,437,250	10,575,488	12,012,738	3,809,193	5,967,288	0	0	193,807	81,100	2,236,257	1,738,660	
134	Industrial System Projects														
135			Refurbish Pump Station 6 (Phase 1)		3,500,000	3,500,000		2,800,000	700,000				0	0	Two viable industrial customers have approached the District requesting I/W. This project rehabilitates Station #6 (PS6). The District is applying for a US EDA grant to fund this project. Grant match will be from zero to 20%. Exact amount will not be known until grant application is approved. Match will ultimately be reimbursed to District from I/W customers.
136	IW1		Maintain Water Supply to Industrial Pump Station 6 During Low-Flow Months		13,250	13,250							13,250	13,250	ANNUAL PROJECT: From 1976 to 1991, channel conditions in Mad River allowed operation of Pump Station 6 without any water stage control. Since then, the river bed has degraded and in the late 1980's it approached an elevation at which pumps would not operate. In 1991, District installed two rock structures to control water surface elevation (rock jetty and grade-control weir). The jetty projects from north bank and downstream weir maintains the water surface elevation to PS6 at 21.5 feet msl. When runoff declines, for many years, the District constructed a gravel berm connecting jetty to the weir. Per the District's HCP, a study was completed to explore options. The current "base case" is creation of a channel along the south bank connecting the thalweg to PS6. The District reserves the right and has permit authority to construct the berm if the channel is not successful. This project covers activities necessary to complete this work: 1) construction of channel 2) biological survey per HCP and 3) protection of aquatic species during construction.
137			I/W Reservoir Overflow Dissipator Maintenance and Hardening		9,500	9,500			9,500				0		This project will pour in place an additional 4 foot ring on the IW dissipator vault to reduce the sanding in that is occurring due to the current beach elevations. It will also include new grating for the top of vault and non-slip manhole rungs on interior for access.
138			Clean-Out Industrial Water Tank		25,000	25,000			25,000				0		These funds are to begin cleaning out turbidity and silt debris from the industrial tank and industrial water line that has been accumulating since the last mill closed in 2009. Due to the significantly decreased water flow through the industrial water line and into the industrial water tank, silt has potentially been settling in the water line as well as the tank. While the entire extent of this project is currently unknown, these funds will allow the District to investigate the extent of the silt as well as the best means to remove it.
139			I/W System Evaluation Memo		26,000	26,000			26,000				0	26,000	Currently the District is keeping the Industrial pipeline charged with water, which helps provide support to the pipe and ensure a continuous electrical conductance to make sure the cathodic protection operates as designed. The District also occasionally operates the pumps at Collector 6 to keep the motors dry and operational and confirm the electrical system is functional. The District is not spending money to perform extensive maintenance, painting, etc. on any of the system components since there is not a customer to pay for these costs. At some point the District needs to make a decision on whether they will perform these deferred maintenance tasks and continue to keep the pipe charged or just let the system gradually fail. This Budget item will entail an overview of the Industrial System, including: general assessment of the assets; level of needed deferred maintenance needed; expected lifetime of the assets without continued maintenance; suggestions for potential alternative use for the asset; and suggestions for procedures to lengthen the lifetime of the assets at minimum expense. The memo will provide a framework for decisions that the District should be making in the next few years concerning the Industrial System components, assuming a new customer is not identified. This task does not include any physical assessment or sampling of the industrial system components.
140			Pump Station 6 Gravel Bar Work Permitting		76,100	76,100			76,100				0	0	The existing weir in the Mad River that is intended to prevent the Mad River from bypassing the Pump Station 6 intake has become less efficient over the last several years, and the main channel in this reach has moved north, away from the Pump Station 6 intake. The District is in the process of discussing with California Dept. of Fish & Wildlife ways to help ensure the channel in front of Pump Station 6 remains the main channel. This would likely include additional grading and work on the gravel bar downstream of the Pump Station. GHD submitted a scope of work and budget in August 2018 for preparing design plans, updating the river model, and permitting the proposed river work with NMFS, California DFW, Army Corps of Engineers and the State Water Quality Control Board. This line item includes the work detailed in the August 23, 2018 scope letter.

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	CATEGORY, LOCATION, PROJECT NUMBER & TITLE			PROJECT EXPENDITURES THIS FY			PROCEEDS FOR PROJECTS				ADDITIONAL CHARGES		Resulting Customer Charges	2020/21 Prior Year Budget Amount	PROJECT DESCRIPTION
7			Treatment	Base Facility	Total	Advance Charges (Collected)	Grants	Reserves	Loans	Advance Charges (Cur. FY)	Debt Service				
141			Industrial System Assistance		10,000	10,000							0	0	This task will consist of assisting the District with the refurbishment of the Industrial System to provide water to Nordic Aquafarms and other potential users on the Samoa Peninsula. The District has developed a budget and preliminary design to refurbish the Industrial System including the Pump Station 6 building and intake screens and pumps to provide continued service and correct deferred maintenance on the system. The District will be able to perform most of this work themselves and should not need much assistance. However, there are some outstanding questions, such as whether to install new transformers that step the voltage down to 480V instead of the current 2300V. There is also the outstanding issue of turbidity removal including whether to install a clarifier or some other sediment removal system on District property. This Task will consist of assisting the District with these and other engineering design issues that may arise this year associated with the Industrial Water system refurbishment. It is difficult to estimate the exact amount of effort required in this task, and the figure below is simply for budgetary purposes.
142			Domestic Water for Nordic		5,000	5,000							0		Nordic Aquafarms is currently taking steps to develop a fish farm on the Samoa Peninsula. In addition to the industrial water that they will require if the facility is built, they will also require domestic water service. Engineering support for this service connection and extension would include attendance at meetings to discuss and determine need, and an analysis of feasibility and/or upgrade requirements that would include a water model analysis. It is unclear at this time how much effort will be required in support of this this in Fiscal Year 2021/22. It is difficult to estimate the exact amount of effort required in this task, and the figure below is simply for budgetary purposes.
143			Industrial and Domestic System Intertie (Crossover vault)		32,000	32,000							0	11,000	It is possible that an engineering analysis may be required for upgrading the domestic/industrial crossover vault at Essex to conform to SWRCB requirements. It is our understanding that staff from the State Water Resources Control Board expressed concern about the configuration of the vault that connects the pipeline from Collector 1 to the industrial waterline and that the District may need GHD to look at options for reconfiguring the vault to address their concerns. The scope for this task is detailed below. This line item includes the work detailed in the February 11, 2020 scope letter. District staff is going to continue to discuss this issue internally and then talk to Scott Gilbreath, the SWRCB rep, prior to making decisions on how to move forward with this.
144	Subtotal Industrial System Projects			0	3,696,850	3,696,850	0	2,800,000	883,600	0	0	0	13,250	50,250	
145	TOTAL PROJECT BUDGET			1,437,250	14,272,338	15,709,588	3,809,193	8,767,288	883,600	0	193,807	81,100	2,249,507	1,788,910	