



Upper Mokelumne River Watershed Authority

UMRWA Regular Governing Board Meeting

Agenda

Friday, July 28, 2023 – 10:00 a.m.
Pardee Center, Valley Springs, CA 95252

ROLL CALL

PLEDGE OF ALLEGIANCE

PUBLIC COMMENT: When responding to a matter not on the agenda, state law limits a Board member to providing a brief response, asking clarifying questions, and/or referring it to staff.

AUTHORITY BUSINESS:

Recommended Action

- | | |
|--|----------------------------|
| 1. Board Meeting Minutes of April 28, 2023 | Approve by Motion |
| 2. Treasurer's Report – 2nd Quarter FY 2023 | Accept for Filing |
| 3. Implementation Status - FPP Phase 1 Project | Discussion/Possible Action |
| 4. FPP-1 Implementation Work Plan Funding Strategy | Approve by Motion |
| 5. Forest Projects Report | Discussion/Possible Action |
| 6. Fiscal Year 2024 Budget | Approve by Motion |
| 7. Upper Mokelumne Biomass Feasibility Investigation | Discussion/Possible Action |
| 8. Legislative Issues Update | Discussion/Possible Action |

BOARD MEMBER COMMENTS:

9. Board Member Comments

EXECUTIVE OFFICER REPORT:

10. Executive Officer's Oral Report

ADJOURNMENT:

- Special Board Meeting: 10:00 a.m. August 25, 2023, at Pardee Center, Valley Springs
- Next Regular Board Meeting: 10:00 a.m. October 6, 2023, at Pardee Center, Valley Springs

Requests for disability-related modification or accommodation, including auxiliary aids or services, may be made to Lorna Barfield at 209.772.8261 or lorna.barfield@ebmud.com no later than 24 hours before the meeting.



Upper Mokelumne River Watershed Authority

Agenda No: **1**

Meeting Date: July 28, 2023

Title:

Meeting Minutes of April 28, 2023

Recommended Action:

Approve the meeting minutes of April 28, 2023.

Summary:

The summary minutes of the April 28, 2023 meeting are included for Board review and approval.

Friday, April 28, 2023 – 10:00 a.m.
Governing Board Regular Meeting
Upper Mokelumne River Watershed Authority
Pardee Center, Valley Springs, CA 95252

Summary Minutes

ROLL CALL

Directors John Coleman, Chair, Terry Woodrow, Vice-chair, Jack Garamendi, Ed Gonzalez, Richard Farrington, Brian Oneto, and Jeff Davidson were present. Absent: Richard Blood, Calaveras Public Utility District. Also present were Executive Officer (EO) Richard Sykes, Authority Counsel Greg Gillott, Authority Secretary Lorna Barfield and 8 visitors.

PUBLIC COMMENT – Maryanne Garamendi reported to the board that six hundred children from twenty-five classrooms in Amador, Calaveras and San Joaquin Counties have participated in the Classroom Aquarium Education Program. They have recently included trout to the program which are being released in the upper Mokelumne Watershed and education focus includes forestry and water quality. She was thanked by the board for her work.

Travis Small from Calaveras Public Utility District gave an update on the current engineering and permitting status of the Jeff Davis Water Treatment Project.

AUTHORITY BUSINESS

1. Regular Meeting Minutes of January 27, 2023.

The summary minutes of the January 27, 2023, meeting were provided to the Board for review.

Motion 08-23 to approve the regular meeting minutes of January 27, 2023, was made by Director Farrington seconded by Director Gonzales and carried by voice vote: Yea 7 – Nay 0 – Abstain 0.

2. Treasurer’s Report – First Quarter FY 2023

A copy of the Treasurer’s Report for the First Quarter of Fiscal Year 2023, which ended December 31, 2022, was presented to the Board.

Motion 09-23 to accept the Treasurer’s Report for filing was made by Director Davidson seconded by Director Woodrow and carried by voice vote: Yea 7 – Nay 0 – Abstain 0.

3. Forest Projects Report

The EO provided the Board with updates on the Authority’s Forest Projects Plan (FPP) Phase 1 Implementation and Phase 2 Planning. Also presented was a brief update on the Mattley Meadow and Aspen Meadow Restoration Projects. The report concluded with a summary of UMRWA Forest Project Grants which have been awarded, not awarded, or are pending. The Board requested that the EO issue a press release based on the most recent CalFire grant award. The EO discussed a draft release which was planned with the Eldorado National Forest (ENF). The Board requested a link to the press release when it is available. Director Farrington requested that the EO investigate the Power Fire funding with the new ENF Supervisor and report back at next meeting.

With NEPA and CEQA requirements fulfilled, and the Cal Fire grant in hand, UMRWA will now begin Phase 1 implementation. Under the Cal Fire grant UMRWA must perform fuel reduction treatments (mechanical and hand) on up to 3,000 acres of Forest Service lands addressed in the FPP-Phase 1 plan and associated NEPA/CEQA documents (which cover a

total of 25,671 acres). Before contracted field treatments may begin several preliminary tasks must be completed.

Supplemental Project Agreement with Eldorado NF: Under the May 2016 USFS – UMRWA Master Stewardship Agreement (MSA) mutually agreed upon stewardship projects are to be documented through Supplemental Project Agreements (SPA). The Stanislaus National Forest (SNF) SPA was executed in 2021. The El Dorado NF SPA was recently finalized and is being processed by the NF Grants and Agreements Division. UMRWA latest discussion with the SNF indicates that the SPA should be ready to execute within 45 days.

Pre-treatment Tasks: Before treatment work actively begins two tasks must first be completed; field locating and flagging known archeological sites, and botanical field surveys.

Field flagging Archeological Sites – The firm InContext, which performed archeological survey work associated with completion of FPP-1 NEPA and CEQA reviews, has agreed to field locate and flag previously located sites. It was recommended that the UMRWA board authorize the Executive Officer to enter into an Amendment to the InContext agreement in the amount of up to \$40,000 for the flagging services. A copy of Amendment 3 to the InContext Agreement was included in the Supplemental April 28, 2023, Agenda Materials Packet.

Botanical Surveys of Treatment Areas – On March 1, 2023, staff released a Request for Proposal (RFP) for qualified Botanical consulting firms. One Proposal was received from Pyramid Botanical Consulting. Following the Authority’s procurement procedure, a selection committee determined Pyramid Botanical Consulting qualified to complete this work. A contract in the amount of \$36,580, with the authorized contract ceiling of \$70,000 (for costs for Pyramid to perform surveys on additional Phase 1 acres as requested by UMRWA), with Pyramid Botanical Consulting was recommended for approval. A copy of Pyramid Botanical Consulting Agreement was included in the Supplemental April 28, 2023, Agenda Materials Packet.

RFPs for Forest Treatment Contractors: Two RFPs are planned to implement the Cal Fire Grant work, one for a mechanical treatment contractor and the other for a hand treatment contractor. The current procurement schedule anticipates RFPs will be released about June 1, contractor proposals (preceded by site visits) submitted by end of June, selection committee process completed by July 10, with contracts awarded at the July 28 Board meeting. In the event snow conditions do not permit June contractor site visits the back-up schedule delays the entire contracting process by about one month. Accordingly, staff recommended the Board reserve August 25, 2023, for a possible special Board meeting to consider forest treatment contract awards.

Implementation Work Plan next steps: Grant funding had already been awarded to URMWA to execute treatments in Group 1 through the \$5M Cal Fire Forest Health grant. In February 2023, a second Cal Fire Forest Health grant application was submitted by UMRWA proposing \$7M in funding to implement fuels reduction within Groups 2, 3 and 4 (Roadside Fuelbreak, Summit Camp and Green Creek). In April, UMRWA staff contacted the Wildlife Conservation Board regarding the possibility of funding Phase 1 implementation and Phase 2 planning. They encouraged staff to submit a pre-application. Supervisor Oneto asked the EO to check into the group 6 and 7 projects in the Implementation Plan and confirm the location and work.

Forest Projects Plan - Phase 2 Planning:

UMRWA engaged Stantec in August 2022 to perform project management and environmental planning for the Phase 2 program. The initial Stantec agreement was in the

amount of \$50,000 with the expectation that subsequent amendments would be executed as additional grant funding became available. At the January meeting the Board approved a first amendment to the agreement to facilitate Stantec's continuing Phase 2 work through spring 2023. Funding for the \$125,000 amendment was split between an existing SNC grant (\$75,000) and UMRWA funds already approved by the board for the FPP (\$50,000).

Stantec work authorized by the first amendment included continued project management, outreach, initiation of tribal engagement, specified NEPA/CEQA planning tasks (project initiation letter, draft purpose and need, determination of NEPA approach with USFS), initiation of communication with regulatory agencies regarding listed species, and support for grant applications. While that work continues, funding to complete the several year process to complete the NEPA/CEQA compliant Phase 2 Plan must still be secured.

SNC will soon be inviting Concept Proposals for the next round of Forest Health grant funding. Another UMRWA grant proposal is recommended for additional funding needed to support UMRWA's Phase 2 planning and associated NEPA/CEQA documentation effort. The Board's authorization to submit the SNC grant proposal is required. The included Resolution 2023-05 authorizing the SNC application was recommended for Board adoption.

Motion 10-23 to (1) approve the Consulting Services Agreement Amendment 3 with the firm InContext for Forest Projects Plan Phase 1 unit flagging with a not-to-exceed fee of \$40,000, (2) approve the Consulting Services Agreement with Pyramid Botanical Consulting for Forest Projects Plan Phase 1 botanical surveys with a not-to-exceed fee of \$70,000, (3) authorize release of Requests for Proposals for Forest Projects Plan Phase 1 Mechanical and Hand Treatments, (4) reserve 10:00 a.m. August 25, 2023, for Special Board meeting, 5) adopt Resolution No. 2023-05 authorizing a Sierra Nevada Conservancy Wildfire Recovery and Forest Resilience Program grant application for FPP – Phase 2 planning and (6) authorize the Executive Officer to submit a pre-application and full application to the Wildlife Conservation Board to fund implementation of Phase 1 and continuation of the Phase 2 planning effort was made by Director Davidson seconded by Director Woodrow and carried by voice vote: Yea 7– Nay 0 – Abstain 0.

4. Status Update on IRWM Grants

The EO provided the Board with a status update on the two active Integrated Regional Water Management (IRWM) grants with the Department of Water Resources. Both grants provide implementation funding for water infrastructure projects, CCWD's West Point project, and CPUD's Jeff Davis project. Also presented was a brief update regarding the drought set-aside project status between the Sierra Institute and Amador Water Agency.

5. Fiscal Year 2024 Budget

The proposed FY 2024 budget was provided to the Board for review. The budget is organized into the Authority's two primary revenue sources, Member funding and non-Member funding (grant, USFS and other funding). The total member-supported portion of the proposed budget is \$322,486 (up from \$311,986 in the current fiscal year budget). Also provided were the member funding offsets and the Authority's work activities planned for FY 2024.

Motion 011-23 to endorse the proposed FY 2024 UMRWA budget for review purposes and authorize staff to transmit the proposed budget for Member Agency review and comment was made by Director Davidson, seconded by Director Farrington and carried by roll call vote: Yea 7 Nay 0 – Abstain 0.

6. Basic Financial Statements – Fiscal Years 2022 & 2021

East Bay Municipal Utility District, whose Finance Director serves as the Authority's Treasurer, maintains the Authority's financial records. The Authority's financial records for the year ending September 30, 2022, and 2021 have been audited by the independent accounting firm Lance, Soll & Lunghard, LLP. This year's audit is presented in the document titled Upper Mokelumne River Watershed Authority Basic Financial Statements - Fiscal Years Ending September 30, 2022, and 2021.

Motion 12-23 to accept the Financial Statements for the years ending September 30, 2022, and 2021 as submitted was made by Director Oneto, seconded by Director Woodrow and carried by voice vote: Yea 7 – Nay 0 – Abstain 0.

7. UMRWA website

A new platform for UMRWA's website has been obtained with the Sacramento based firm Streamline who specializes in website hosting and support for California special districts and is well suited to small local government applications. UMRWA members CPUD and JVID are existing subscribers. Staff had sought out alternative website host and support options following the January Board discussion concerning the Authority's ongoing web and document management needs. The switch to Streamline, which after nominal set up expenses will cost \$1,080 annually, will result in a savings of about \$9,400 per year over the prior host and support arrangement.

8. Legislative Issues Update

Executive Officer Richard Sykes shared information regarding several state bills of interest to UMRWA including SB 338 which would make specified forest health work subject to California prevailing wage law, potentially resulting in a substantial increase in cost for this type of work. SB 338 was opposed by UMRWA and vetoed by the Governor in the previous legislative session. Also discussed were several bond bills that would provide forest health and infrastructure funding.

AB 1567 would enact the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2024, which, if approved by the voters, would authorize the issuance of bonds in the amount of \$15.1B to finance projects for safe drinking water, wildfire prevention, drought preparation, flood protection, extreme heat mitigation, and workforce development programs.

SB 638, the Climate Resiliency and Flood Protection Bond Act of 2024 would authorize \$6B in bonds mostly for flood control measures in the Central Valley but \$1B is earmarked to help local agencies fund dam repairs and improvements.

SB 867 would enact the Drought and Water Resilience, Wildfire and Forest Resilience, Coastal Resilience, Extreme Heat Mitigation, Biodiversity and Nature-Based Climate Solutions, Climate Smart Agriculture, and Park Creation and Outdoor Access Bond Act of 2023, which, if approved by the voters, would authorize the issuance of bonds in an unspecified amount pursuant to the State General Obligation Bond Law to finance projects for drought and water resilience, wildfire and forest resilience, coastal resilience, extreme heat mitigation, biodiversity and nature-based climate solutions, climate smart agriculture, and park creation and outdoor access programs.

Motion 13-23 to oppose SB 338 was made by Director Davidson, seconded by Director Woodrow and carried by voice vote: Yea 7 – Nay 0 – Abstain 0.

Board Member Comments:

Director Farrington requested the Board examine the revenue reserves of the \$45M designated for the Power Fire restoration. The EO will place this item on the agenda for the next Board meeting for discussion and possible action. Director Farrington also expressed concerns that AB 1554 which would exempt CEQA requirements in wildfire fuel reduction projects was declined to be heard by the Natural Resources Committee.

Director Patterson shared that May 2023 marks the 100th anniversary of EBMUD and Director Gonzales asked about reservoir levels and the current water releases from Camanche.

Director Coleman told the Board that he may not be present at the next meeting or potential special meeting in August.

Director Davidson reported information regarding possible fire-retardant restrictions in wild and scenic designated rivers and requested the Board to discuss this topic at the next meeting.

Executive Officer Comments:

The Executive Officer reminded the Board members of the 3rd amended JPA transmittal and requested the signed document be returned. The EO also shared with the Board that the next meeting will include a Blue Forest Conservation presentation on a Forest Resilience Bond.

ADJOURNMENT: Director Coleman adjourned the meeting at 11:22 a.m. The next regular meeting will be held on July 28, 2023, at Pardee Center.

SUBMITTED BY:

Lorna Barfield, Authority Secretary

John Coleman, Chair of the Board
APPROVED: July 28, 2023



Upper Mokelumne River Watershed Authority

Agenda No: **2**

Meeting Date: July 28, 2023

Title:

Treasurer's Report – 2nd Quarter FY 2023

Recommended Actions:

Accept for filing.

Summary:

A copy of the Treasurer's Report for the Second Quarter of fiscal year 2023, which ended March 31, 2023, is included here, and will be presented at the Board meeting.

**UPPER MOKELUMNE RIVER WATERSHED AUTHORITY
TREASURER'S REPORT
STATEMENT FOR THE PERIOD ENDING MARCH 31, 2023**

<i>Fiscal Year 2023 (beginning Oct. 1, 2022)</i>	Assessment, Grants & USFS	Budget FY 2023	Actual		
			Current Quarter	YTD	YTD %
<u>General Assessments & Operating Revenue</u>					
Amador Agencies Funding	39,537	39,537	-	39,537	100%
Calaveras Agencies Funding	46,035	46,035	-	46,035	100%
EBMUD Funding	86,122	86,122	-	86,122	100%
Member Agencies Contribution	171,694	171,694	-	171,694	100%
Prior Year Unspent/Carry forward	182,150	182,150	-	-	0%
Applied Indirect Fee Revenues	15,000	15,000	-	-	0%
Interest/Misc income	-	-	336	345	
Applied Operating Reserve (Adjusted Bal. \$428,217)	66,806	66,806	-	-	0%
Misc Revenue	263,956	263,956	336	345	0%
Total Assessments & Operations Funding	435,650	435,650	336	172,039	39%
<u>IRWM Grant Funding</u>					
CCWD - West Point WTP (Prop 1)	390,129	390,129	52,738	(5,661)	-1%
CPUD - Jeff Davis WTP	TBD	TBD	-	-	
<u>Forestry/Watershed Funding</u>					
Sierra Nevada Conservancy - Forest Projects Plan (#1280)	16,239	16,239	-	9,464	58%
Sierra Nevada Conservancy - RFFCP (#969)	178,017	178,017	50,327	74,746	42%
CalFire Grant	4,999,967	4,999,967	-	-	0%
Wildlife Conservation Board -	627,317	627,317	14,835	26,521	4%
Total Grants and Other Funding	6,211,669	6,211,669	117,900	105,070	2%
TOTAL REVENUES & FUNDING	6,647,319	6,647,319	118,236	277,109	4%
<u>ASSESSMENT EXPENDITURES</u>					
General Assessment (Administration)					
Executive Officer		50,000	6,780	17,455	35%
Administrative Officer		50,000	11,960	22,160	44%
Website Support (Woodard & Curran) (w/\$8,000 carry forward)		20,000	1,743	1,743	9%
General Assessment (Operations)					
MLLT - STE Watershed Program CY 2021/22 (w/\$7,769 carry forward)		24,269	7,769	7,769	32%
Inter-agency Liaison & Board Support (LEI, Inc)		5,000	1,113	1,491	30%
Forest-related Grant Applications/Project Development (LEI, Inc)		50,000	3,343	12,467	25%
Phase 1 FPP Completion (LEI, Inc) (w/\$10,000 carry forward)		20,000	-	-	0%
FPP-1 Implementation Plan (LEI, Inc)		20,000	-	-	0%
Forest Projects Plan - Phase 2 Support (Regine/LEI)		15,000	2,286	3,581	24%
Forest Projects Plan - Phase 2 (Stantec/Cardno) (w/\$44,959 carry forward)		169,959	-	4,034	2%
IRWM Grant Application/Project Development		3,582	-	-	0%
DWR Grant Support (Woodard & Curran)		7,840	-	-	0%
TOTAL ASSESSMENT EXPENDITURES		435,650	34,994	70,700	16%
<u>GRANT and FORESTRY/WATERSHED FUNDING EXPENDITURES</u>					
DWR Prop 1 Implementation Grant					
CCWD - West Point WTP		TBD	-	-	
Woodard & Curran - invoicing & reporting		14,869	-	-	0%
WRA - agreement administration		4,000	-	-	0%
DWR Prop 1 Grant - Round 2					
CPUD - Jeff Davis WTP		TBD	-	-	
Woodard & Curran - invoicing & reporting		17,160	-	-	0%
WRA - agreement administration		TBD	-	-	
SNC - RFFCP					
Landmark Environmental Inc.		107,674	36,333	66,677	62%
InContext (RFP 22-01)		52,541	(101,466)	(77,978)	-148%
WCB - Aspen Restoration Project					
Landmark Environmental Inc.		252,401	5,711	10,779	4%
Institute For Bird Populations		221,099	2,960	7,675	3%
Reserved for technical field work		139,500	-	-	0%
SNC - Forest Projects Plan					
Landmark Environmental Inc.		16,239	-	8,230	51%
CalFire Grant (Hwy 88 Project)					
Landmark Environmental Inc.		4,892,629	23,146	23,146	0%
InContext		107,338	107,338	107,338	100%
Reserved for Contractors		TBD	-	-	
TOTAL GRANT EXPENDITURES		5,825,450	74,022	145,867	3%
Total Project Expenses		6,261,100	109,016	216,567	3%



Upper Mokelumne River Watershed Authority

Agenda No: **3**

Meeting Date: July 28, 2023

Title:

Implementation Status - FPP Phase 1 Project

Recommended Actions:

For discussion and possible action. Board members are requested to confirm today their attendance at the scheduled August 25 Special Board Meeting.

Summary:

The long delayed Supplemental Project Agreement (SPA) with Eldorado National Forest (ENF) was executed on June 22, 2023. With the \$5M Cal Fire grant and ENF SPA agreements in hand, staff finalized the Request for Proposal (RFP) to perform the Forest Projects Plan - Phase 1 (FPP-1) treatment work and released it on July 3. Seventy-three contractors were sent the RFP via direct email, and it is posted on the UMRWA website.

Contractor proposals are due July 26 at noon. The Selection Review Committee will meet on July 31 to review and rank submitted proposals and follow-up with reference checks. A Notice of Recommended Award will then be transmitted to all proposers, with the bid protest period ending August 10. The Board will consider awarding a contract to the recommended contractor at the scheduled August 25 Special Meeting.



Upper Mokelumne River Watershed Authority

Agenda No: 4

Meeting Date: July 28, 2023

Title:

FPP - Phase 1 Implementation Work Plan Funding Strategy

Recommended Actions:

1. Authorize UMRWA to assume lead role in overseeing Forest Projects Plan – Phase 1 implementation and set 4,000 acres as the annual forest treatments goal.
2. Direct staff to meet with Eldorado National Forest and USFS Region 5 Leadership to present UMRWA’s Funding Strategy, seek input, and secure Forest Service support.
3. Authorize staff to further advance the following Funding Strategy tasks:
 - a) Work with Authority Counsel and Blue Forest to develop Forest Resilience Bond and Loan agreements for Board consideration by January 26, 2024.
 - b) Work with Authority Counsel and Anew to develop a Carbon Credit and Marketing Agreement for Board consideration on October 6, 2023.
 - c) Work cooperatively with Eldorado National Forest to procure USFS funding commitments to implement Forest Projects Plan – Phase 1 projects.

Summary:

This agenda item presents a framework for a Forest Projects Plan – Phase 1 (FPP-1) Funding Strategy that could allow UMRWA to execute and sustain the level of planning and implementation work necessary for increasing the pace and scale of forest restoration work in the Eldorado National Forest (ENF). The FPP-1 plan and associated environmental clearances, which cover more than 26,000 acres of ENF lands in the Upper Mokelumne, were completed in January 2023. To guide implementation, UMRWA and ENF then completed an FPP-1 Implementation Work Plan in March. The Work Plan was developed as a ranking process for sequencing implementation of 22 groups of geographically delineated work areas based on risk and consequence prioritization criteria. The estimated total cost for implementing the Work Plan’s urgently needed treatment projects is \$63.4M.

UMRWA is positioned to continue its leadership role in stewardship activities to protect and restore ENF lands in the Upper Mokelumne by assuming the lead for FPP-1 implementation. To do so in a systematic and efficient manner will require UMRWA to undertake the following:

- Secure access to funding to complete FPP-1 treatments. The preliminary estimated cost for completing FPP-1 treatments is \$63.4 million. Cal Fire has provided the first \$11.4M of the required funding (via two grant awards, the first \$5M and the second \$6.4M of the total \$7M award) leaving a \$52M unfunded balance.
- Expand and maintain UMRWA organizational capacities. Before ramping up UMRWA’s pace and scale of fuel reduction treatment work its organizational capabilities and capacities must be ensured. These include GIS-based project mapping, consulting services related to archeological and biological resources, preparing and administering Requests for Proposals, administering contractor selection processes and contract awards, establishing contractor safety and fire

response protocols, coordinating USFS – UMRWA field roles and responsibilities, and more.

Discussed below are the key elements of a Funding Strategy that could facilitate the completion of the FPP-1 Work Plan. Actions required to ensure UMRWA has sufficient organizational capacity to assume the lead role for implementing the Work Plan will be presented at future meetings as UMRWA’s funding strategy progresses.

Two presentations are planned at this Board Meeting in conjunction with this agenda item. David Lach, Director of Environmental Products at Anew, will provide an overview of the Avoided Wildfire Emissions credit market. And Matt Sjöholm, Blue Forest Conservation, will present an update on progress being made towards a Forest Resilience Bond in support of UMRWA’s forest work. Briefing materials related to these two presentations are included in the supplemental packet.

FPP-1 Funding Strategy:

The proposed Funding Strategy is based on the following expectations and assumptions.

- Implement 4,000 acres of forest treatments per year, on average.
- The estimated unfunded cost to complete FPP-1 treatments is \$52M.
- Funds secured by UMRWA are non-repayable (e.g., grants, USFS cash).
- Cash flow interruptions due to delays in grant payments (or payments from other secured funding sources) are to be bridged by a zero-interest Blue Forest loan agreement or other line of credit source.
- Treatment work begins with contracts awarded in 2023, and concludes with contracts awarded in 2029, with all contracted treatment work completed by 2031.

Presented below is an overview of the proposed Funding Strategy organized into five basic elements: funding requirements, implementation schedule and cash flow, funding sources, bridge financing, and strategy execution.

Funding Requirements

The Phase 1 Implementation Work Plan anticipates fuel reduction treatments to about 26,256 acres at an estimated total cost of \$63,400,000. With \$11.4M in Cal Fire treatment funding in hand, a plan for securing \$52M in additional funding is needed.

Plan Count # (Group Name)	Mechanical (acres)	Hand incl. Aspen (acres)	Estimated Cost to Treat*
1 (Phase 1 - Cal Fire)	2,542	249	\$5M (Cal Fire #1 grant)
2, 3, 4 - Arbor (Phase 1A)	2,732	58	\$6.4M (\$7M Cal Fire #2 grant)
5, 7-11, 13-16, 18, 20, 21	15,762	- -	\$42,000,000
6, 12, 17, 19, 22	- -	4,913	\$10,000,000
Total	21,036	5,220	\$63,400,000

* Estimated cost assumes \$2,000/acre mechanical treatments, \$1,600/acre hand treatments, plus 35% for project management, environmental compliance, field supervision, and indirect.

Implementation Schedule and Cash Flow:

The timeline presented in the table below shows annual cash flow requirements ranging over the 8-year implementation period from \$2.5M in the first year and up to nearly \$10.4M in peak years. These cash flow projections reflect the following assumptions:

- Contracts awarded July/August each year for work to treat a combined 4,000 acres on average.
- First set of contracts awarded 2023 (Cal Fire \$5M), second set 2024 (Cal Fire \$6.4M)
- Five sets of additional contracts awarded 2025 – 2029 for treatments to 20,000+ acres and thus the completion of Phase 1
- Contractors are given 2 full seasons to complete contracted work.
- Contractors complete 50% of contracted acres in the first full season, and the remaining 50% in the second full season.

FPP 1 Project Implementation and Cash Flow Timeline									
Award Years	Acres Awarded	2024	2025	2026	2027	2028	2029	2030	2031
		Acres Treated	Acres Treated						
2023	2,791	1296	1295						
2024	2,790		1395	1395					
2025	4,000			2,000	2,000				
2026	4,000				2,000	2,000			
2027	4,000					2,000	2,000		
2028	4,000						2,000	2,000	
2029	4,000							2,000	2,000
Required* Cash Flow \$ =		2,500,000	5,700,000	8,384,000	10,368,000	10,368,000	10,368,000	10,368,000	5,184,000
* For \$ estimate purposes:								Total =	63,240,000
2024 & 2025 per awarded grant acreage expectations, with 50% grant treatment budget spread equally over 2 years, plus 35%.									
2026 - 2031 assumes treatments at 80% Mechanical at \$2,000/ac and 20% Hand at \$1,600/acre, plus 35%.									

Funding Sources:

This Funding Strategy assumes all funds secured and applied by UMRWA to FPP-1 implementation costs (excluding bridge financing for cash flow purposes) are non-repayable. To date, UMRWA’s non-repayable funding sources have been state grants and the USFS. Cal Fire and Sierra Nevada Conservancy (SNC) have thus far been the primary providers of funding for UMRWA’s forest work, and are viewed as likely sources for grant funding going forward. For the prior treatment work UMRWA performed on Stanislaus NF lands, funding was also provided by the USFS. Federal funding for FPP-1 treatments is therefore another potential non-repayable source.

Two other possible non-repayable funding sources are Avoided Wildfire Emissions (AWE) credits, and Avoided Cost payments associated with a Forest Resilience Bond (see Bridge Financing section below). AWE credits represent a new potential revenue source to fund continuing forest treatments. David Lach with Anew will present more information to the Board about this emerging program. For reference, please see Attachment 1, “Funding for Forest Health Treatments, Tapping the Carbon Market”. [Additionally, legislatively directed funding could be another potential non-refundable source of funding.]

The table below displays the primary non-repayable sources of funding potentially available to UMRWA.

Source	Basis	Cash Flow Implication
State Grant Agreements	Reimbursed project costs incurred by UMRWA	Funds available 3 – 5 months after expenses incurred
USFS Cash (via Project SPA)	Reimbursed project costs incurred by UMRWA	Funds available 2 – 3 months after expenses incurred
Avoided Wildfire Emissions credits	Credit payments issued after project completed and verified	Funds available 2 – 3 years after expenses incurred
Avoided Cost payments	Negotiated payments as specified in FRB Beneficiary Agreements	Predictable and recurring annual revenue stream

Bridge Financing:

As noted above, the Funding Strategy assumes all funds secured and applied by UMRWA to FPP-1 implementation costs are non-repayable. However, with annual cash flow requirements in some years potentially exceeding \$10M, and with grant payments in some cases taking up to 90 days or longer, it will be necessary for UMRWA to arrange bridge financing or a line of credit to ensure UMRWA has sufficient cash in hand to timely pay treatment contractors.

A Forest Resilience Bond (FRB) includes a feature that allows the FRB to borrow the funding needed to establish a line of credit for UMRWA. The associated financial instrument is an unsecured Loan and Services Agreement. The negotiated terms specify the maximum loan amount, disbursement procedures, interest (zero interest may be possible) and related matters. Attachment 2 to this agenda item is a Blue Forest memorandum that provides more detailed information about the FRB and associated elements.

In the event an FRB is not achievable in a timely fashion, another potential source of bridge financing is a line of credit with an UMRWA member agency. EBMUD has extended a line of credit to UMRWA in the past to address cash flow limitations associated with DWR funded Implementation Grant projects. UMRWA paid a nominal interest rate pegged to state Local Agency Investment Fund (LAIF) interest rates. Another such bridge financing arrangement with EBMUD could be explored.

To UMRWA, and specifically to its interest in executing a systematic and efficient FPP-1 implementation program, the fundamental value of an FRB or other line of credit arrangement is that it would allow UMRWA to maintain a steady pace in annually cycling projects, from treatment plans, to RFPs, to contract awards, to treatments performed, to project close-outs. It would fulfill an essential requirement of UMRWA’s Funding Strategy as it prepares to award contracts to treatment contracts – cash flow certainty.

Strategy Execution:

Carrying out the Funding Strategy to advance treatments to an average 4,000 acres/year will require UMRWA to annually administer two recurring cyclic processes; (1) funding and contracting, and (2) treatment project implementation. The key activities associated with these two processes, organized by quarter, are presented below.

Quarter	Funding & Contracting	Treatment Implementation
1 (Jan-Mar)	<ul style="list-style-type: none"> - Update FPP-1 Implement. Work Plan - Prepare grant applications (grant cycles occur through calendar year) - Seek USFS project funding 	<ul style="list-style-type: none"> - Solicit proposals for technical field work - Award field work contracts
2 (Apr-Jun)	<ul style="list-style-type: none"> - Coord. w/ENF re: next project details - Develop next project GIS/maps - Develop next project specifications - Draft next project RFP(s) 	<ul style="list-style-type: none"> - Archeological surveys - Botanical surveys - Unit boundary flagging - Contractor start-up field meetings
3 (Jul-Sep)	<ul style="list-style-type: none"> - Contractor pre-bid meetings - Board approve grant agreements - Board approve treatment contracts - Execute contracts, authorize work - Secure loans if/as needed 	<ul style="list-style-type: none"> - Monitor contractor performance - Secure ENF approval/work performed - Coord. arch./biologic. field activities - Process contractor invoices/payments
4 (Oct-Dec)	<ul style="list-style-type: none"> - Prepare grant completion reports - Close out contractor agreements 	<ul style="list-style-type: none"> - Assess prior season's work - Coordinate with contractors re: following season's needs and expectations



Upper Mokelumne River Watershed Authority

Agenda No: **5**

Meeting Date: July 28, 2023

Title: Forest Projects Report

Recommended Actions:

For discussion and possible action.

Summary:

This Forest Projects Report presents updates on the Authority's Forest Projects Plan - Phase 1 (FPP-1) Implementation and Phase 2 Planning, along with a summary of a Tribal Engagement Plan prepared by staff. This report concludes with a table titled 'UMRWA Forest Project Grants' which summarizes grants awarded and grant applications planned or pending.

Forest Projects Plan - Phase 1 Implementation:

The status of FPP-1 Implementation, which is currently focused on the contractor procurement process, is presented in the preceding Agenda Item No. 3.

Forest Projects Plan - Phase 2 Planning:

The landscape-level Phase 2 FPP initiative was initiated in September 2022. The planning and associated environmental processes will address forest health issues on up to 225,000 acres of Stanislaus and Eldorado NF lands within and flanking the Upper Mokelumne watershed. In addition to the large scale, the second phase of the FPP process will consider forestry activities not included in Phase 1 due to potentially more significant environmental impacts. For comparison, FPP-2 is expected to be similar in scope and complexity to the Stanislaus NF's SERAL Project.

Stantec, the firm hired last August to undertake the Phase 2 program, has developed the detailed project work plan for completion of NEPA and CEQA, established and conducted initial stakeholder and technical advisory group meetings, and has organized and guided several UMRWA/USFS partnership team meetings. Working with and through the advisory groups and partnership team Stantec continues to perform: stakeholder outreach (including tribal engagement), specified NEPA/CEQA planning tasks (project initiation letter, draft purpose and need, determination of NEPA approach with USFS), and liaison activities with regulatory agencies regarding listed species, and support for grant applications.

Funding committed to support Stantec's authorized FPP-2 work is split between UMRWA (\$100,000) and SNC (\$75,000). The most recent Cal Fire Grant Award of \$7M earmarks about \$500,000 for FPP-2 Planning which will help fund Stantec's future work plus other activities. As FPP-2 work continues, funding to complete the planning and related NEPA/CEQA documentation must still be secured. On April 28, the Board approved the submittal of a Concept Proposal for the next round of SNC Wildfire Recovery & Forest Resilience Forest grant funding. Staff prepared and submitted that Concept Proposal on June 14, and on July 12 staff was notified that UMRWA was invited to submit a Final

Proposal by the September 29, 2023, deadline. SNC is scheduled to announce grant awards next spring (March/April 2024).

One additional UMRWA grant proposal is currently being evaluated by staff for potential FPP Phase 1 and Phase 2 support. The Wildlife Conservation Board’s Prop 68 grant program provides funding for climate adaptation and forest resiliency projects (this program is supporting the Authority’s ongoing Aspen Restoration project under a 2022 grant) and may be a viable funding source for Phase 1 or 2 FPP activities.

Tribal Engagement Plan:

With encouragement from UMRWA grant funders SNC and Cal Fire, staff have prepared a Tribal Engagement Plan which provides guidance to Authority staff regarding tribal outreach on Upper Mokelumne forestry matters. With ever increasing local and regional interest in competitively based state forest health grant programs, the plan provides UMRWA with an additional scoring advantage and proactively responds to past grant application critiques by the funding agencies.

The plan itself aims to enhance UMRWA’s forestry program by facilitating tribal participation in forest-related project planning and implementation. UMRWA’s hope is to ensure regular input from a wide group of tribal interests in a semi-formal manner (with meetings, calls, tours, etc). Formal consultation with Tribes remains the responsibility of the US Forest Service. UMRWA’s facilitation role is intended to strengthen communication, build trust, and develop beneficial relationships with Tribes that have historical ties and ongoing interest in the management of Upper Mokelumne forest resources. With grant funding provided by agencies, UMRWA will engage a Tribal Liaison to serve as the Authority’s central point of contact for Tribes. The Tribal Liaison will help ensure the outreach and communication efforts articulated in the plan are carried out.

UMRWA Forest Project Grants:

UMRWA is awaiting receipt of draft agreement documents related to the second Cal Fire grant (\$7M for Phase 1 implementation work). Additionally, UMRWA has two active SNC grants, one active Wildlife Conservation Board grant, and the one active Cal Fire Forest Health Grant. As noted above, full applications for two SNC Wildfire Recovery and Resilience grants are also currently in process. These grants are summarized below.

UMRWA FOREST PROJECT GRANTS

Approved	Pending
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Grant	By	Amount	Tasks/Deliverables	Key Dates
Forest & Watershed Health (# 1280)	SNC	\$200,000 (13% indirect)	- FPP Phase 1 Plan - NEPA/CEQA documentation	Execute: 6/22/21 Complete: 2/15/27
WIP Capacity Program – Early Action (# 969-RFFCP)	SNC	\$354,944 (10% indirect)	- NEPA documents - ACCG consultation/Tribal - Decision Memo	Execute: 5/23/22 Complete: 12/1/24
WCB – Prop 68 (# WC-2262CR)	WCB	\$649,400 (5.6% indirect)	- Aspen inventory - Prioritization/design plan - Environmental compliance	Execute: 6/10/22 Complete: 3/31/25
Forest Health Program (GGRF)	Cal Fire	\$4,999,967 (10% indirect)	- NEPA/CEQA clearance - Fuel treatments >2,255 acres	Execute: 7/25/22 Complete: 3/31/26
Forest Health Program (GGRF)	Cal Fire	\$7,000,000	- Implement FPP-1 treatments on minimum 3,133 acres	Full Ap: 2/28/23 Award Notice: 4/24/23

Wildfire Recovery & Forest Resilience <i>(Planning)</i>	SNC (#1646)	Invited to submit full application (\$700,000)	- Develop FPP Phase 2 Plan - NEPA/CEQA documentation	Concept: 6/14/23 Full Ap: 9/29/23 Award: Spring 2024
Wildfire Recovery & Forest Resilience <i>(Implementation)</i>	SNC (#1636)	Invited to submit full application (\$4,876,480)	- Implement FPP-1 fuel treatments on 1,952 acres	Concept: 6/14/23 Full Ap: 9/29/23 Award: Spring 2024
WCB – Prop 68 (#2)	WCB	TBD	- TBD; grant \$ for climate adaptation/resiliency projects	TBD



Upper Mokelumne River Watershed Authority

Agenda No: 6

Meeting Date: July 28, 2023

Title:

Fiscal Year 2024 Budget

Recommended Action:

Approve the Fiscal Year 2024 UMRWA budget and authorize staff to transmit invoices to Member Agencies requesting payment of FY 2024 assessments by October 31, 2023.

Summary:

On April 28 the Board reviewed the proposed FY 2024 Budget and directed staff to transmit the proposed budget to Member Agencies for review. In May a memorandum presenting the FY 2024 budget and assessments was sent to Member Agency General Managers and County Administrative Officers with copies to UMRWA Board directors. Member agency staff had no comments on the proposed budget.

The recommended FY 2024 budget is presented in Tables 1 and 2. The total member-supported portion of the proposed budget is \$322,486 (up from \$311,986 in the current budget). Also presented in Table 2 are member funding offsets. These are in-kind Member contributions and apportionment of accumulated Reserve funds. The resulting Member Agency funding allocations and resulting assessment amounts are shown in Table 3. For FY 2024 the calculated Reserves balance is \$316,658.

The budget is organized into the Authority's two primary revenue sources, Member funding and non-Member funding (grant, USFS, and other funding). The Authority's work activities planned for FY 2024 are summarized below.

For the Member-funded portion of the proposed FY 2024 budget the following activities and associated funding requirements are assumed:

- a) Increase the funding level for Board and Authority administration to \$122,500 (from \$112,000). This includes an additional \$10,000 in funding for each the Executive Officer and Administrative Officer positions plus costs for a cloud based UMRWA documents system, less \$10,800 savings for the new umrwa.org website platform.
- b) Maintain unchanged the annual funding support for the local school watershed education program at \$16,500.
- c) Maintain unchanged at \$100,000 the funding level for costs associated with the forest health implementation and planning grant proposals, plus funding for UMRWA's Forest Projects Plan - Phase 2 activities not covered by grants.
- d) Maintain unchanged at \$25,000 the funding for IRWM-related tasks requiring Member funding (e.g., possible Prop 1 Implementation Grant application).

For non-Member funded portions of the budget, grant and other funding associated with SNC, Cal Fire, USFS and other potential sources for FY 2024 will be determined in September 2023, the final month of UMRWA's current fiscal year. Awarded but uncollected FY 2023 funds will be carried forward to FY 2024. Those amounts will be determined based on the September 30, 2023, end of Fiscal Year 2023 Treasurer's Report.

Table 1 – PROPOSED FY 2024 MEMBER FUNDED BUDGET

Programs	Categories	Member Funds	Other Funds (DWR, USFS, SNC)	Total Member Funded Program Budgets
Board and Authority Admin.	Executive Officer	60,000		122,500
	Administrative Officer	60,000		
	Webpage and File Hosting	2,500		
Watershed Ed.	Public school program (STE)	16,500		16,500
Forest Health	Forest Projects Plan – Phase 1	0		100,000
	Forest Projects Plan – Phase 2	50,000		
	Forest-related Grant Applications	40,000		
	Inter-agency liaison & Board support	10,000		
IRWM	Grant applications	25,000		25,000
Grant Pass-through	Jeff Davis WTP Backwash Project	0	TBD	0
	UMRWA administration	0	TBD	
TOTAL BUDGET		\$264,000	Carry forward	\$264,000

Actual carry forward amounts to be determined at end of fiscal year, Sept. 30, 2023

Table 2 – FY 2024 MEMBER AGENCY FUNDING OFFSETS

Member assessments	As required by the above Proposed Fiscal Year Budget	\$264,000
Off budget <i>In-kind</i> contributions*	Authority Legal Counsel \$6,500 (Amador County) Accounting (\$28,746), annual audit (\$5,240) and Authority Secretary (\$18,000) (EBMUD)	\$58,486*
	TOTAL MEMBER SUPPORTED BUDGET =	\$322,486
Reserves	Credit 50% surplus Reserves balance as budget off-set	(\$111,559)
	TOTAL REQUIRED MEMBER FUNDING =	\$210,927

* In-kind labor costs are Member-provided estimates of prior year work performed in support of UMRWA.

Table 3 – FY 2024 MEMBER FUNDING ALLOCATIONS & ASSESSMENTS

Formula % Share	Member Agency %	Proposed FY23 Allocation	In-Kind Credit	Proposed FY 2024 Assessment	Actual FY 2023 Assessment
Amador Entities 20%	Amador County – 9.2%	19,405	(6,500)	12,905	13,825
	Amador Water Agency – 9.2%	19,405	0	19,405	20,325
	Jackson Valley ID – 1.6%	3,375	0	3,375	3,535
Calaveras Entities 20%	Calaveras County – 6.0%	12,656	0	12,656	13,255
	Calaveras County WD – 9.6%	20,250	0	20,250	21,208
	Calaveras PUD – 4.4%	9,280	0	9,280	9,720
EBMUD	EBMUD – 60%	126,556	(51,986)	74,570	89,826
TOTAL		\$210,927	\$58,486	\$152,441	\$171,694



Upper Mokelumne River Watershed Authority

Agenda No: **7**

Meeting Date: July 28, 2023

Title:

Biomass Feasibility Investigation

Summary:

UMRWA staff were recently contacted by Christiana Darlington of the Central Sierra California Forest Residual Aggregation Market Enhancement (Cal FRAME) pilot project. There are four other Cal FRAME pilot projects currently underway in California. The pilots are funded by the Governor's Office of Planning and Research as part of the State's Wildfire and Forest Resilience Action Plan. The purpose of the pilot projects is to evaluate and recommend approaches to increasing the utilization of forest biomass in support of multiple benefits to the state. Cal FRAME has completed a feasibility study for Northeast California and is currently working on a study for the Central Sierra including the Mokelumne River Watershed. Cal FRAME is evaluating whether Joint Powers Authorities can be useful in establishing a biomass market to attract investment in projects. Staff provided information regarding UMRWA's Joint Powers Authority Agreement and the Forest Health Program. Staff will share the draft report for the Central Sierra region when it is available.



Upper Mokelumne River Watershed Authority

Agenda No: **8**

Meeting Date: July 28, 2023

Title:

Legislative Issues Update

Recommended Action:

For discussion and possible action.

Summary:

There are several state bills of interest to UMRWA including AB 338 which is like last year's AB 1717 which was opposed by UMRWA and vetoed by the governor. AB 338 would make specified forest health work subject to California prevailing wage law, potentially resulting in a substantial increase in the cost of this type of work. This bill is authored by Assembly member Aguilar-Curry. At its April 28 meeting, the UMRWA board voted to oppose this bill. An opposition letter was sent to the author on May 8, 2023. Earlier this month the bill was re-referred to the committee on appropriations. If enacted, the bill would become law on January 1, 2025, with a one-year delay for non-profits.

There are several bond bills that would provide forest health and infrastructure funding which would benefit UMRWA and its member agencies. AB 1567, as amended on May 26, 2023 would enact the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, Clean Energy and Workforce Development Bond Act of 2024, which, if approved by the voters, would authorize the issuance of bonds in the amount of \$15.995B to finance projects for safe drinking water, wildfire prevention, drought preparation, flood protection, extreme heat mitigation, and workforce development programs. This bill allocates \$2.275B for wildfire risk reduction and climate change preparedness. The bill would specifically support forest collaboratives such as the work UMRWA is doing in conjunction with the USFS and ACCG, and it would also give additional money to Cal Fire for the types of projects it currently funds with the Greenhouse Gas Reduction Fund. The bill would also allocate \$5.25B for projects to address drinking water supply and infrastructure needs. The bill would go to the voters for approval at the March 5, 2024, state primary election.

SB 638, as amended on June 28, 2023, would enact the Climate Resiliency and Flood Protection Bond Act of 2024, and would authorize \$6B in bonds mostly for flood control measures in the Central Valley with \$1B of this amount earmarked to help local agencies fund dam repairs and improvements.

SB 867 as amended on June 22, 2023 would enact the Drought and Water Resilience, Wildfire and Forest Resilience, Coastal Resilience, Extreme Heat Mitigation, Biodiversity and Nature-Based Climate Solutions, Climate Smart Agriculture, and Park Creation and Outdoor Access Bond Act of 2023, which, if approved by the voters, would authorize the issuance of \$15.5B in bonds to finance projects for drought and water resilience, wildfire and forest resilience, coastal resilience, extreme heat mitigation, biodiversity and nature-based climate solutions, climate smart agriculture, and park creation and outdoor access programs. The bill would allocate \$5.2B for water resilience projects and \$3B for forest

resilience projects. The bill would go to the voters for approval at the March 5, 2024, state primary election. The bill would only be effective if SB 638 is enacted prior to January 1, 2024.

UMRWA staff will provide additional information on legislative matters of interest as appropriate at the board meeting.



Upper Mokelumne River Watershed Authority

Supplemental Agenda Materials Packet - July 28, 2023 -

Table of Contents

Agenda #	Agenda Item Title	Document Name
4	FPP-1 Implementation Work Plan Funding Strategy	1. Funding for Forest Health Treatments, Tapping the Carbon Market 2. Blue Forest Memorandum for UMRWA Board of Directors - Status Report: Upper Mokelumne Watershed Forest Resilience Bond Exploration

Members

Alpine County • Alpine County Water Agency • Amador County • Amador Water Agency • Calaveras County • Calaveras County Water District •
Calaveras Public Utility District • East Bay Municipal Utility District • Jackson Valley Irrigation District

Funding for Forest Health Treatments: Tapping into the Carbon Market

The need to scale up fuel treatments across California and beyond is increasing, but funding remains a major challenge. A new initiative is now advancing based on decade-long research on the greenhouse gas emissions implications of fuel treatments: tapping into the carbon market through avoided wildfire emissions (AWE). In collaboration with Climate Forward, a sub-platform of the Climate Action Registry, we at SIG, Anew, CAL FIRE and others are in the process of establishing a funding source for fuel treatments through the carbon market.



How it works

1. Gauge carbon-based funding for specific projects
2. Assess fuel treatment capacity to lower wildfire emission risks
3. Project-specific analysis based on fuel treatment location, type, and implementation status
4. Register project with Climate Forward
5. Carbon credits issued upon fuel treatment implementation; sale of credits through Anew

Potential funding through Anew is available to promising projects prior to implementation. Minimum data input required by implementing agency; AWE quantification by SIG.

How much funding is available?

Funding depends on project scale, location, fuel treatment type, and carbon market. Projects will be evaluated by SIG/Anew to determine funding opportunity prior to any commitment.

→ CONTINUED ON BACK

Frequently Asked Questions About AWE

1. What activities are eligible to generate AWE credits?

Prescribed burns, thinning, pruning, mastication, or mechanical removal of vegetation are all eligible for credit generation.

2. Is there a minimum project acreage size?

Some factors like location and treatment type impact this number, but generally total treatments in excess of 1,000-3,000 acres will be viable. These treatment areas do not have to be contiguous or even occur in the same year as long as they are within three years of each other.

3. Can projects take place on federal, state, and/or private land?

Yes, yes, and yes. Unlike traditional forest carbon projects, ownership is irrelevant to AWE credit generation; eligible entities must only implement or oversee implementation of fuels treatments.

4. How long does it take to go from contracting to receiving funds?

While it takes 12-18 months to calculate carbon benefits, achieve confirmation with the registry, and get credits issued, Anew will begin marketing your project's credits as soon as a contract agreement is in place, ensuring that credits sell at, or shortly after, credit issuance. Proceeds are returned to our partners within 30 days after sale to end users.

5. What happens if my project area burns due to wildfire after treatments occur?

There are no ongoing monitoring or reporting responsibilities after a project is approved, and accordingly, there is no liability to you for wildfire emissions. Because emissions reductions are calculated and credited conservatively over the ensuing 40 years, near-term emissions are factored in.

6. What is the added time/cost to me for pursuing funding from carbon markets?

Upon agreeing to commercial terms, your only obligation is reporting of treatment areas and treatment timing to Anew as activities occur. We will handle every intermediate step and expense and return the lion's share of credit sales proceeds to you as they are received.

Interested?
**Reach out to
learn more.**

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Anew / anewclimate.com

Anew Climate, LLC (“**Anew**”) is accelerating the fight against climate change by enabling any company or organization to align its goals for conservation and impact with actionable next steps. With a comprehensive solutions portfolio that includes advisory services, carbon credits, renewable natural gas, renewable energy credits, EV credits, plastic credits, and emission reduction credits, we lower barriers to participation in environmental markets for clients across the private and public sectors.

Spatial Informatics Group / sig-gis.com

Founded in 1998, Spatial Informatics Group, LLC (SIG) is a group of research scientists and applied thinkers with broad expertise in geospatial analysis, forestry, environmental and socio economic sciences. We use innovative spatial analysis methods to uncover new insights and provide guidance to solve challenging real-world problems in natural and urban landscapes.

Memorandum for UMRWA Board of Directors

Status Report: Upper Mokelumne Watershed Forest Resilience Bond Exploration

July 28, 2023

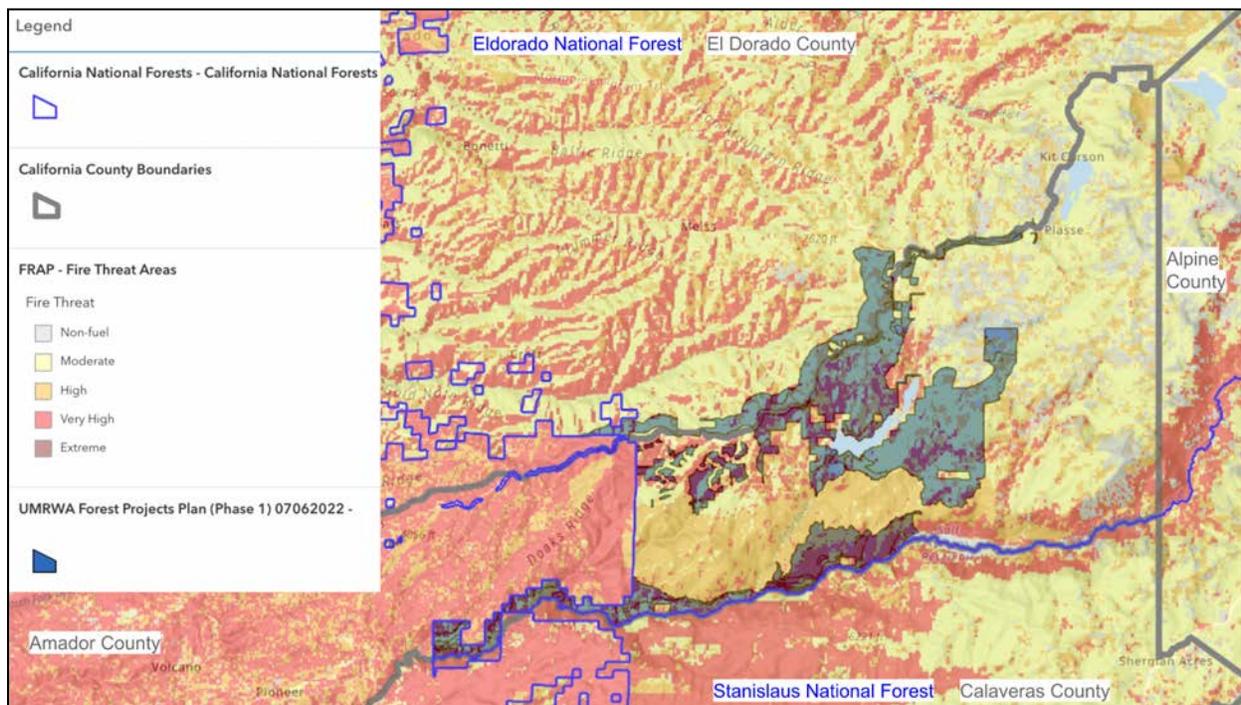
Purpose

Blue Forest and UMRWA have prepared this memo for the July 28, 2023 UMRWA Board meeting. The purpose of this memo is to provide an update about UMRWA and Blue Forest’s collaborative effort to develop a Forest Resilience Bond (FRB) to support implementation of forest restoration projects in the Upper Mokelumne River Watershed. This memo is a status report for informational purposes only - no decision or approval is required and discussion is welcomed.

Project Context

To address the growing threat of catastrophic wildfire in the Mokelumne River watershed, UMRWA, in collaboration with the Eldorado and Stanislaus National Forests, is planning over 225,000 acres of forest restoration and fuels reduction efforts on National Forest System land through the [Forest Projects Plan](#). Implementing these forest restoration projects will reduce the risk of catastrophic wildfire to local communities and water supply infrastructure, as well as provide a host of other benefits. Planning and permitting are complete for Forest Projects Plan Phase 1 (25,671 acres) and implementation will begin during fall of 2023 or spring of 2024 (Figure 1).

FIGURE 1: UMRWA PROJECT AREA & FIRE THREATS



Forest Projects Plan Phase 1 implementation will cost an estimated \$63.4 million. To date, UMRWA has engaged the State of California to secure two grants from CAL FIRE for \$5 million and \$6.4 million to support implementation activities, leaving a remaining unfunded balance of \$52 million. Planning for future phases of the Forest Projects Plan is currently underway and will expand forest restoration activities across the Upper Mokelumne River watershed landscape for even greater benefits, which will require additional funding and support.

UMRWA's Collaboration with Blue Forest

UMRWA is a strong local non-profit leader with a shared interest in protecting this region alongside the USDA Forest Service and other watershed stakeholders. To explore innovative funding approaches for the Forest Projects Plan, UMRWA partnered with Blue Forest in March 2021 (through an MOU) to explore the development of a Forest Resilience Bond (FRB) for the Mokelumne River watershed. UMRWA has demonstrated excitement and support for using the FRB model to expedite and scale forest restoration to reduce the risk of catastrophic fire on this landscape.

About Blue Forest

[Blue Forest](#) is a nonprofit founded in 2015 to finance natural infrastructure projects to address the growing threat of wildfire in the Western United States. We are a small interdisciplinary team of scientists, finance and policy experts, foresters, engineers, and communication professionals. We use [conservation finance](#) to sustain resilient landscapes, ecosystems, and communities. Blue Forest has a Challenge Cost Share Agreement with the USDA Forest Service and is a trusted partner working to support the implementation of landscape-scale resilience projects.

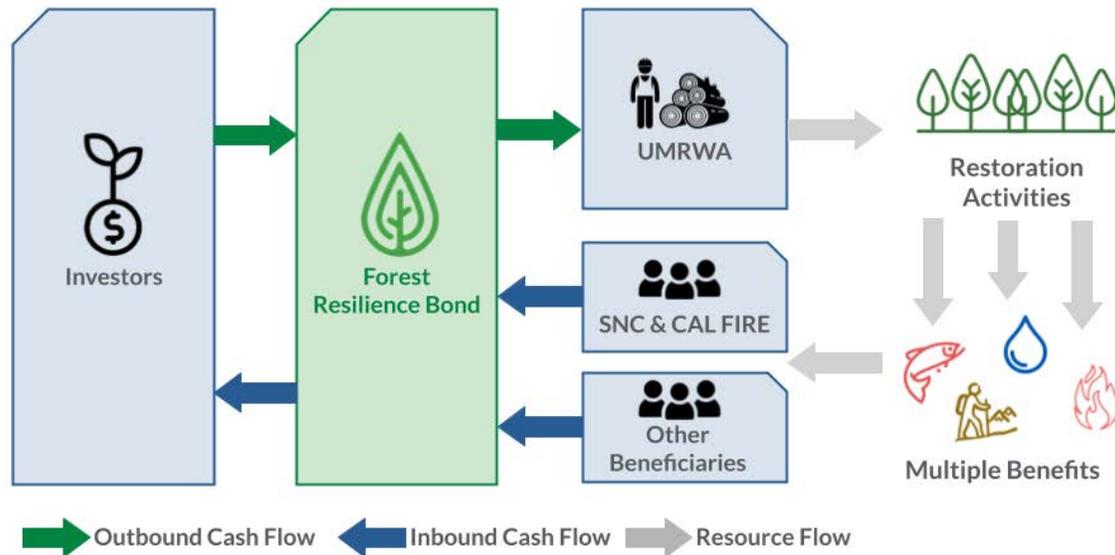
About The Forest Resilience Bond

Blue Forest and its partners developed the [Forest Resilience Bond](#) (FRB) to overcome barriers to forest restoration and accelerate investment in forest health and watershed protection. The FRB is a public-private partnership financing tool that provides up-front capital to implement critical restoration projects at a faster pace and scale, and supports implementation partners (like UMRWA) by building institutional and workforce capacity. The FRB secures low-interest private market capital from organizations such as pension funds, foundations, and impact investors to provide up-front funding for forest restoration. This financing model is not new – it resembles infrastructure finance used to build public facilities like bridges and water treatment plants. The FRB applies the financing approach in new applications to protect and enhance natural infrastructure like forests and watersheds.

When developing FRBs, Blue Forest works with local project partners to identify and quantify project benefits and engage downstream project beneficiaries (such as utilities, corporations, and government agencies) that value the work and can help repay the FRB over time. For a conservation finance tool like the FRB to be successful, baseline ecological and economic data must be available and beneficiaries must be interested in the projected benefits. Strong cross-boundary relationships and existing local partnerships further support the opportunities and feasibility of the FRB. This collaborative and data-driven funding approach reduces project costs for any one entity and vastly increases the scale and pace of forest restoration. Blue Forest negotiates FRB contracts with beneficiaries that are designed with flexible repayment terms while providing modest returns to investors.

The FRB is also a helpful tool for attracting public funding to a project: participation from local beneficiaries often attracts additional state and federal funding, including US Forest Service (USFS) Infrastructure Bill 10-Year Strategy awards, Inflation Reduction Act (IRA) funding through the Water Source Protection Program, and funding via designation as Wildfire Crisis Strategy Priority Landscape.

FIGURE 2: STRUCTURE OF THE FOREST RESILIENCE BOND



Forest Resilience Bond Exploration for the UMRWA Project

UMRWA and Blue Forest are working to develop a pilot FRB to finance the first \$5-10 million of implementation costs for the Forest Projects Plan. The goal is to pilot the FRB model in 2024 and, if successful, to expand the FRB to support the larger project landscape over the next decade. Starting with a smaller pilot FRB will give stakeholders an opportunity to gain familiarity and confidence with the model and build relationships with one another, the Forest Service, and Blue Forest. This pilot-to-scale approach also enables beneficiaries to support the project with smaller initial funding commitments.

This envisioned FRB to implement the Forest Projects Plan would provide UMRWA with a comprehensive line of credit enabling rapid payment of contractors and alleviating cash flow constraints that can arise when funding a project with reimbursable grants alone (e.g. CAL FIRE grants). This ability to pay contractors quickly through an FRB (within 10 days) can reduce the price of project bids when UMRWA solicits proposals from contractors and will allow UMRWA to focus on meeting its annual goals for treatment instead of triaging cash flow constraints. Depending on its structure and available funds, an FRB may also provide additional grant funding to UMRWA to support restoration projects.

Forest Resilience Bond Progress To Date

UMRWA, the Forest Service, and Blue Forest have met monthly to discuss this project and develop a strategy for an FRB in the Mokelumne River watershed. These meetings have focused on confirming planned treatments to inform benefit analysis activities, confirming the benefits of financing for UMRWA, and refining economic analysis approaches. Based on these discussions, Blue Forest is actively engaging potential project beneficiaries, including East Bay Municipal Utility District (EBMUD), Amador Water Agency, and Calaveras County Water District.

Blue Forest has also partnered with World Resources Institute (WRI) to develop an economic model to analyze the watershed benefits of the project (described in the sections below). The model will be used to help beneficiaries understand the impact of forest management projects on their bottom lines and explore their interest in financially committing to an FRB.

Project Benefit Analysis

Much work has already been done to analyze and quantify the benefits of completing forest restoration projects in the Mokelumne River watershed. For example, the [2014 Mokelumne Watershed Avoided Cost Analysis](#) highlights several benefits of forest treatments for this landscape, concluding that a \$68 million investment in fuels treatments could yield between \$126-224 million in benefits for the State of California, federal government, residential private property owners (and their insurers), timber owners, and water and electric utilities (Figure 3).

FIGURE 3: ESTIMATED COSTS & BENEFITS FOR FUEL TREATMENT SCENARIOS

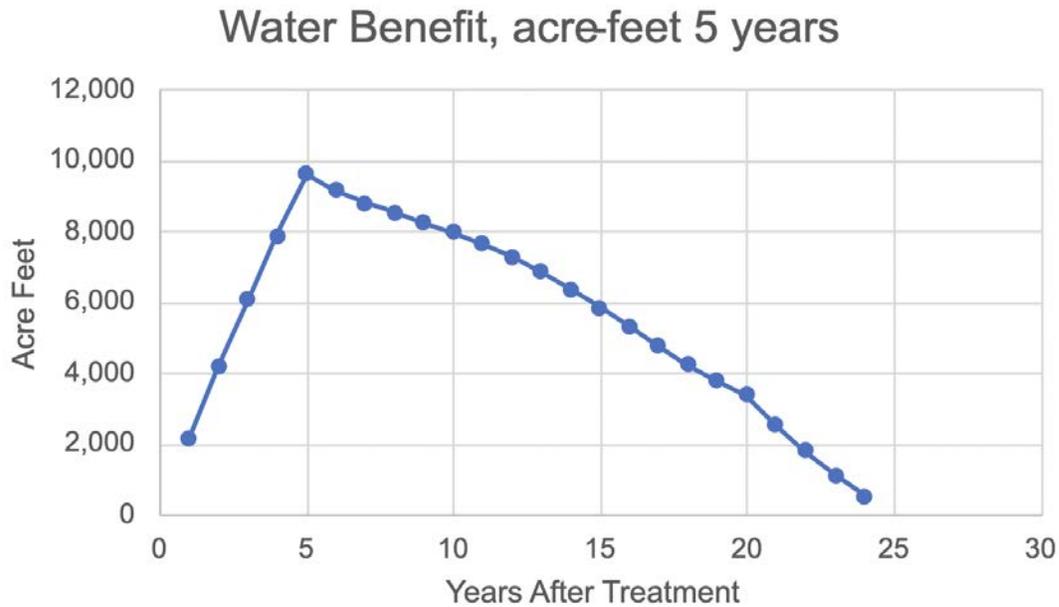
Costs		
Fuel Treatment	\$16,000,000	\$68,000,000
Benefits		
	Low	High
Structures Saved	\$32,000,000	\$45,600,000
Avoided Fire Cleanup	\$22,500,000	\$22,500,000
Carbon Sequestered	\$19,000,000	\$71,000,000
Merchantable Timber from Treatment	\$14,000,000	\$27,000,000
Avoided Suppression	\$12,500,000	\$20,800,000
Biomass from Treatment	\$12,000,000	\$21,000,000
Avoided Road Repairs and Reconstruction	\$10,630,000	\$10,630,000
Transmission Lines Saved	\$1,600,000	\$1,600,000
Timber Saved	\$1,200,000	\$3,130,250
Avoided Sediment for Utilities (water supply)	\$1,000,000	\$1,000,000
Total Benefits	\$126,430,000	\$224,260,250

Note: Values rounded to significant figures.

Source: 2014 Mokelumne Watershed Avoided Cost Analysis

To build on these foundational cost-benefit insights from the Mokelumne Watershed Avoided Cost Analysis, Blue Forest developed a water volume benefit model that incorporates findings from a growing body of peer-reviewed research demonstrating a positive relationship between fuels management projects and water yield in the central and northern Sierra Nevada. Blue Forest’s recent *Science Brief: Water Resource Benefits from Forest Fuels Reduction* (included in the July 2023 UMRWA Board meeting packet) provides an overview of the approach used to model anticipated water yield benefits of the Forest Projects Plan. Blue Forest’s water yield benefit model estimates that Forest Projects Plan Phase 1 will result in 133,940 acre-feet of additional runoff over a 25-year period from reduced vegetation water use (Figure 4). This expected additional water yield could be a significant source of value for water users within the Mokelumne River watershed.

FIGURE 4: PROJECTED WATER YIELD BENEFITS OF FOREST TREATMENTS



While Blue Forest’s benefit analysis of the Forest Projects Plan has focused on benefits with quantifiable economic implications, additional benefits of significance are likely to result from the project that can inform funding decisions by project stakeholders. A few of these benefits include:

- **Improved Forest Health** by restoring stand structure and species composition to better withstand wildfire, drought, and other disturbances.
- **Protected and Enhanced Habitat**
- **Reduced Carbon Emissions** that affect public health throughout the region and climate goals.
- **Stimulation of the Regional Economy** by protecting and generating jobs and safeguarding the region’s tourism and recreation appeal.

Economic Analysis & Beneficiary Engagement

In order to connect project benefits with potential funding contributions from beneficiaries, Blue Forest and World Resources Institute are working closely with East Bay Municipal Utility District (EBMUD) to develop an economic model that quantifies the benefits of the Forest Projects Plan Phase 1. The primary benefits analyzed in the economic model include additional water yield (for diversion and hydropower generation) and avoided sedimentation and woody debris impacts from catastrophic fire events. Early modeling results indicate the greatest watershed benefits and risk reduction outcomes are expected from mechanical fuel reduction and prescribed burning treatments.

Many stakeholders in the Mokelumne River watershed are positioned to benefit economically from forest restoration activities, including UMRWA member agencies, PG&E, and private corporations with sustainability, conservation, and watershed protection goals. As a next step, Blue Forest intends to engage and collaborate with these stakeholders to explore the unique economic benefits of forest restoration on their business operations with the goal of securing interest and funding commitments from a diverse group of beneficiaries to support an FRB for Forest Projects Plan Phase 1. Amador Water Agency and Calaveras County Water District have both participated in preliminary conversations to learn

more about the FRB. Amador water agency expressed particular interest in water quality benefits and both agencies expressed support for the FRB model.

Next Steps and Schedule

With UMRWA Board direction and with existing State of California grant funding, UMRWA will proceed with Forest Projects Plan Phase 1 implementation this summer. UMRWA staff will continue to work with Blue Forest to build momentum and structure for a pilot Mokelumne River watershed FRB (including beneficiary engagement) anticipated for UMRWA Board consideration by January 26, 2024. Blue Forest's next steps for continued FRB development include:

- Finalizing the economic analysis with EBMUD and discussing next steps
- Meeting with other UMRWA member agencies to discuss the economic benefits of the project and potential funding proposals
- Engaging corporations who may have interest in funding restoration efforts in the Mokelumne River watershed
- Confirming funding commitments to launch a pilot FRB

APPENDICES

Appendix A: Examples of Successful Forest Resilience Bonds

[Yuba Project FRBs](#) support holistic landscape-scale forest restoration in the Yuba River Ranger District of Tahoe National Forest, protecting a total of 75,000 acres. Benefits include:

- 19,830 acre-feet of water supply protected
- 19,600 metric tons of carbon dioxide emissions avoided
- 60,904 tons of biomass utilized for affordable and clean energy generation
- 24 total partners actively engaged in the Yuba River Watershed and FRB
- 92 jobs created (external, not Blue Forest positions)
- The Yuba FRB's catalyzed the formation of the North Yuba Forest Partnership
- To date, \$28.5 million in additional funding has been leveraged through the North Yuba Forest Partnership

[Rogue Valley FRB](#) in Southwest Oregon supports restoring this critical landscape to reduce fire risk, and protecting seven of the thirty most wildfire-threatened communities in the state. This FRB partners with the [Lomakatsi Restoration Project](#) to restore over 79,000 acres. The FRB provides much-needed upfront capital and organizational support, enabling Lomakatsi to grow workforce capacity and work at a faster pace and scale.

Appendix B: Forest Resilience Bond Criteria, Contracting & Diligence

A successful FRB requires the following foundational building blocks, which the Forest Projects Plan has:

- NEPA-ready project, planned and permitted by local partners
- Robust local leader and project implementer with capacity and expertise to undertake restoration
- Benefits and ecosystem services present a compelling business case for multiple beneficiaries
- Local collaboration structures and opportunities, and cross-boundary relationships
- Baseline ecological and economic data in place, ability to quantify future outcomes

Blue Forest administers the FRB through the following contracting and due diligence process which reduces financial risk and enables project partners to focus their capacity on forest restoration:

- *FRB Operating Agreement with Blue Forest* - Blue Forest establishes a project-specific FRB LLC as a non-profit enabling low interest rates and as an efficient way to distribute and move funds
- *Investor Agreement with FRB*
- *UMRWA (Implementation Partner) Zero Interest Loan (and Grant) Agreement(s)* - UMRWA repays FRB with grants, does not pay any interest
- *Beneficiary Repayment Agreements* - Beneficiaries like EBMUD & Amador Water Agency agree to repay the FRB over time with a small amount of interest, and some modest administrative costs.
- *Investors assume the financial risk*, not UMRWA or beneficiaries
- *Financial Due Diligence Process* - UMRWA provides financial and administrative documentation to Blue Forest, similar to what is required by federal and state grant and loan programs. This process ensures that the UMRWA is comfortable with the requirements of the FRB, and that Blue Forest takes appropriate care before extending the loan.