MIDDLE FORK PROJECT
FINANCE AUTHORITY

Hell Hole Dam - January 2016

Budget
2017

The Middle Fork Project Finance Authority was established on January 10, 2006, under a Joint Exercise of Powers Agreement by and between the County of Placer and the Placer County Water Agency.

Purpose of the Authority

The purpose of the Authority is to serve the mutual interests of the County and the Agency, exclusively, to provide for the financing required to obtain a new Federal Energy Regulatory Commission (FERC) license, to approve Future Electrical Energy Sales, and to distribute revenues from Future Electrical Energy Sales.

The Powers of the Authority are specified in the Joint Powers Agreement and among some of these include:

- Review and approve the annual MFP operating budget
- Contract for the sale of electrical energy
- Distribute the net revenues from the sale of electrical energy
- Incur debt

Structure of the Authority

The Authority Board of Directors consists of 4 members: 2 members from the County Board of Supervisors and 2 members for the Agency Board of Directors.

Board of Directors of Authority for 2016*

Placer County Board of Supervisors

- Jim Holmes
- Robert Weygandt***

Placer County Water Agency

- Primo Santini
- Mike Lee**

** Chair for 2016

*** Vice Chair for 2016

Officers of MFP Finance Authority

- Executive Director: Agency General Manager, Einar Maisch
- Secretary: Placer County Executive Officer, David Boesch
- Treasurer: Agency Director of Financial Services, Joseph Parker
- Legal Advisor: Agency Legal Counsel, Scott A. Morris, Kronick, Moskovitz, Tiedemann & Girard

***Sitting Board who approved the 2017 Budget**

Approved by Authority Board of Directors October 20, 2016

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MIDDLE FORK PROJECT FINANCE AUTHORITY
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M E M O R A N D U M

TO: Board of Directors Middle Fork Project Finance Authority

FROM: Joseph H. Parker, CPA, Treasurer

DATE: October 25, 2016

RE: The Adopted 2017 MFP Finance Authority Annual Budget

Overview

Attached herewith is the Adopted 2017 Middle Fork Project Finance Authority (Authority) Budget, totaling $42.3 million, which is comprised of a $26.6 million operating budget and a $15.7 million capital budget. This 5-year Budget is provided with 2016 (adjusted and projection), the 2017 Budget (**bolded**), as well as the following four years (2018 - 2021) in the following attached schedules:

- Summary Budget Schedule Years 2016 - 2021
- Budget Schedule Years 2016 - 2021
- Reserve Schedule Years 2016 - 2021
- MFP Capital Plan as funded by the Authority 2017 - 2021

In accordance with the Board's General Financial Policies, the budget was prepared with the consultation and involvement of both Placer County Water Agency (Agency) and Placer County staff for presentation to the Authority Board.

The following pages provide additional details regarding budgetary changes from 2016, discussion and analysis, and other background information.

2017 Adopted Budget - Overview

The following provides an overview of the 2017 Adopted Middle Fork Project Finance Authority Budget:

2017 **Power Sales** revenue is increased by 4.6% or $1.9 million over the 2016 Power Sales Adjusted Budget, which has been budgeted in accordance with policy and consistent with prior year budget practices, at 80% of average hydrology and reasonable energy market price projections. Should additional Power Sales revenue be realized, this additional revenue would be first directed to fund reserves until targets are met and then available for distributions, in accordance with Board policy. Conversely, should less than the budgeted Power Sales be realized, the financial year would be balanced by reducing the capital and/or operating budgets and/or drawing from reserves. The latter would require Board approval prior to use.

The 2017 **Operating Budget expenditures** are decreased by 6% or $1.8 million compared with the Adjusted 2016 Operating Budget. The following discussion provides a comparison between the Adjusted 2016 Budget and the Adopted 2017 Budget:

PCWA Power Division – Operating:

Power Operations is reduced by $1.4 million. The largest change in the Power Operations budget stems from the June 2016 execution of the Northern California Power Agency (NCPA) agreement which provides control center functions, thus, eliminating the need for the control center positions, a $940,000 savings. (See discussion under **Control Center and Schedule Coordinator Functions** below.) Overall, the cost share partnership budget is decreasing with the US Forest Service recreation agreements down by $276,000 because of prior year carryover of funding and the cooperative road management budget of $249,000 being transferred from operations to capital projects.

General and Administrative is increased by a net $66,000 because of additional support services (service level support) offset by combining the middle and back offices functions (two positions) into one position, insurance premiums savings totaling $100,000, the addition of in-house legal counsel of $101,000 which is offset with reduction in prior legal service budgets in various departments.

Natural Resource Management is reduced by $105,000, which is primarily attributable to a refinement of the needed consulting services and a reduction of budgeted legal expense with the addition of in-house legal counsel. The Federal Energy Regulatory Commission (FERC) License is currently projected to be issued in 2018, thus the 2017 operational implementation expense budget is consistent with 2016. Prior to receiving the FERC License, several license implementation functions continue to be developed as will be the planning and appropriating for infrastructure projects (Capital Plan) that are required under the license, recreational facility planning and implementation and ongoing coordination with both El Dorado and Tahoe National Forests where project recreational facilities are located.

Power Resource Management is reduced by $232,000, which is attributable to a refinement of the needed consulting services and a reduction of budgeted legal expense with the addition of in-house legal counsel.

Routine Capital is reduced by $126,000 as the 2017 needs are less. The Routine Capital Budget is for the purchase of new or replacement equipment and vehicles and varies annually with replacement and other needs.

Debt Service is the same as the Adjusted 2016 Budget with semi-annual principal and interest payments of $2.8 million.

Reserves and Capital Funding – The Authority's General Financial Policies adopted in April 2013, requires reserve funding which is rooted in the Authority's JPA requirement to establish and maintain prudent reserves. This Policy sets forth three reserve categories: Operating, Capital, and Emergency. Reserve funding and reporting is to be part of the annual budget process. The reserve category full funding targets in priority funding order is as follows:

Operating Reserve: Operating reserve target amount is set at a minimum of one year of operating expenses.

Emergency Reserve: To be based on the total amount of emergency funds considered necessary under a severe outage contingency and be evaluated with other funding/financing resources. The emergency reserve target is currently set at $2 million for insurance deductible and other immediate needs.

Capital Reserve: Capital reserve funding target is based on the 5-year Capital Plan with the target amount determined by a multiple year methodology based on resource needs (annual Capital Plan amounts) whereby the current and subsequent budget years are to be fully funded and years 3 - 5 are to be funded at a declining percentage of their resource needs at 50%, 33% and 25%, respectively.

Per Policy, the Operating reserve is to be fully funded prior to funding the Emergency and Capital reserves. As the drought and low energy prices severely reduced Power Sales revenue since May 2013, funds have not been available to allocate to the reserve categories as originally planned. Based on the 2016 Projection, the Operating reserve will be funded to its target level of $25.8 million as will the Emergency reserve to its target level of $2.0 million. The remaining $2.3 million will be funded to the Capital reserve. The Capital reserve will function as a "sinking-fund" for annual capital project appropriations and thus help supplement capital project funding.

Capital Plan – As in the past couple of annual Authority Budgets, the 2017 5-year Capital Plan is segmented into three broad categories:

1. Upgrade or Enhancement Projects,
2. Renewal, Replacement and Reliability Projects, and
3. FERC License Implementation Projects.

Over the next 5-years, the upgrade or enhancement projects total $18.4 million or 38% of the 5-year amount and are considered "one-time" expenditures (performed every 20 – 30 years) as these projects implement new technology and enhance generation flexibility for more efficient, effective and improved generating or operating capabilities of the MFP. Because of resource constraints and the significant reduction of 2015 capital budget funding of 75%, upgrade or enhancement capital projects will extend beyond the 2017 5-year Capital Plan.

The second category of renewal, replacement and reliability type projects total $12.0 million or 25% of the 5-year amount.

The FERC License Implementation Projects are also "one-time" capital projects which total $17.5 million or 37% of the 5-year total Capital Plan. The FERC implementation capital projects will be required with the new FERC license. Because the FERC License is currently projected to be issued in 2018, the FERC implementation capital projects will extend beyond the 2017 5-year Capital Plan.

For years beyond 2021, capital projects are currently estimated to be approximately $5 - 8 million per year. There will still be a few upgrade or enhancement projects to be completed as well as certain FERC license implementation projects both of which should be winding down in the subsequent 5 years.

Control Center and Schedule Coordinator Functions

Under the Power Purchase Agreement (PPA) between the Agency and PG&E that began on May 1, 2013, the Agency has full responsibility for determining energy schedules for all MFP generating units. PG&E performs control and dispatch center and schedule coordinator services for the duration of the agreement through December 31, 2017. As compensation for performing these critical functions on the Agency's behalf, PG&E retains approximately $1.5 million of gross energy sale revenues in an average hydrologic year, while the Authority receives the balance of all energy sale payments.

Beginning in 2014, due diligence was performed in preparation for subsequent contract periods. Based on this due diligence, in Spring 2016, it was determined that Northern California Power Agency (NCPA) could provide these functions. In June 2016, an agreement was executed with NCPA under which NCPA will be designated as the Agency's Scheduling Agent with CAISO, which will allow NCPA to serve as the control center and remote dispatch for the MFP on an around-the-clock basis.

This agreement, which begins January 1, 2018 at an annual amount of $410,000 to be escalated at an annual rate of 2.5%, has been incorporated into the 5-Year Budget.

Five Year Budget Schedule (2017 – 2021)

In the Budget Schedule, Power Sales revenue exhibits a downward step in 2018 as the existing Power Purchase Agreement (PPA) ends December 31, 2017 and based on current projections, capacity payment will be substantially less in future years.

Also worth noting is that the 5-year Capital Plan decreased almost $18 million from the 2016 5-year Capital Plan to $47.9 million with many refinements to the upgrades projects to meet resource needs along with the FERC license implementation projects shifting back as the license is delayed. The 2017 5-Year Budget is a sustainable budget for years 2017 and 2018 and during years 2019 – 2021 the Capital Reserves are slightly used to fulfil the annual Capital Plan needs.

MIDDLE FORK PROJECT FINANCE AUTHORITY
Summary Budget Schedule
Years 2016 - 2021

	2016	
	Adjusted 2016	Projection 2016
Revenues and Other Financing Sources	$ 41,433,000	42,700,000
Expenditures, Appropriations and Other Uses:		
Administration	145,000	145,000
PCWA Power Division - Operating	22,582,426	19,582,426
Appropriation to Capital Projects (through Capital Reserve) See detail below	**12,618,000**	**12,618,000**
Debt Service	5,690,730	5,690,730
Total Expenditures and Appropriations	41,036,156	38,036,156
Reserve Funding:		
Operating Reserves	396,844	385,114
Emergency Reserves	-	2,000,000
Capital Reserves	-	2,278,730
Total Reserve Funding	396,844	4,663,844
Net Revenue	$ -	-

Detail of Capital Projects:

Upgrades

Renewal, Replacement and Reliability

FERC License Implementation Projects

Total Appropriations to Capital Projects

For years beyond 2021, ongoing capital projects are estimated to be approximately $6 million/year.

	Adjusted 2016	Projection 2016
Estimated Year-end Reserve Balances:		
Operating Reserve (target is $25.8 million)	$ 25,761,730	25,750,000
Emergency Reserve (target is $2 million)	-	2,000,000
Capital Reserve * (long-term target estimate is $15 million)	-	2,278,730
Total Estimated Year-end Reserve Balances	$ 25,761,730	30,028,730

* The Capital Reserve funding target is a rolling target based on the 5-year Capital Plan.

2017 & 2018		Future Years			
Adopted 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Total 2017-2021
43,408,000	36,794,000	37,681,000	38,567,000	39,454,000	195,904,000
149,000	153,000	157,000	161,100	165,300	785,400
20,758,512	22,065,000	25,408,000	25,447,000	25,750,000	119,428,512
15,661,000	**7,299,000**	**7,464,000**	**9,251,000**	**8,223,000**	**47,898,000**
5,690,730	5,690,730	5,690,730	5,690,730	5,690,730	28,453,650
42,259,242	35,207,730	38,719,730	40,549,830	39,829,030	196,565,562
-	-	-	-	-	-
-	-	-	-	-	-
1,148,758	1,586,270	(1,038,730)	(1,982,830)	(375,030)	(661,562)
1,148,758	1,586,270	(1,038,730)	(1,982,830)	(375,030)	(661,562)
-	-	-	-	-	-
$ 9,000,000	*4,600,000*	*3,682,000*	*1,100,000*	-	*18,382,000*
2,725,000	*1,500,000*	*2,200,000*	*1,850,000*	*3,730,000*	*12,005,000*
3,936,000	*1,199,000*	*1,582,000*	*6,301,000*	*4,493,000*	*17,511,000*
$ 15,661,000	*7,299,000*	*7,464,000*	*9,251,000*	*8,223,000*	*47,898,000*
25,750,000	25,750,000	25,750,000	25,750,000	25,750,000	
2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
3,427,488	5,013,758	3,975,028	1,992,198	1,617,168	
31,177,488	32,763,758	31,725,028	29,742,198	29,367,168	

MIDDLE FORK PROJECT FINANCE AUTHORITY
Budget Schedule
Years 2016 - 2021

		Adjusted 2016	Projection 2016
Revenues and Other Financing Sources:			
Power Sales *(Note 1)*	$	41,413,000	42,600,000
Interest Income		20,000	100,000
Total Revenues and Other Financing Sources		41,433,000	42,700,000
Expenditures and Other Uses:			
Administration:			
Office Supplies		5,300	5,300
Administration		37,400	72,400
Professional Services		102,300	67,300
Total Administration Expenditures		145,000	145,000
PCWA Power Division - Operating:			
Power Operations		13,554,053	11,554,053
General and Administrative		4,584,827	4,584,827
Natural Resources Management		1,846,448	1,346,448
Power Resources Management		1,907,098	1,407,098
Routine Capital		690,000	690,000
Total PCWA Power Division - Operating		22,582,426	19,582,426
Debt Service *(Note 2)*		5,690,730	5,690,730
Total Operating Expenditures		28,418,156	25,418,156
Reserve Contributions: *(Note 3)*			
Operating Reserves		396,844	385,114
Emergency Reserves		-	2,000,000
Capital Reserves		12,618,000	14,896,730
Total Reserve Funding		13,014,844	17,281,844
Net Revenue		-	-
Distributions and Debt Payment Requirement:			
County		-	-
PCWA		-	-
Additional Principal Payment		-	-
Total Distributions and Debt Payment Requirement		-	-
Net	$	-	-

General Note: The amount encumbered for consulting and construction contracts that span more than one fiscal year totals approximately $2.5 million.

Note 1: **Power Sales** are subject to significant fluctuation in both power values and hydrology. Revenue is projected based on 80% of the average hydrologic year, relying on operating reserves to cover short periods of drought or mechanical outages. Power sales are based on 100% capacity payment and 80% energy payment. Years 2017 - 2021 are based on projections determined by the Power Resources Management team. The current energy sales contract with PG&E ends December 31, 2017. The Power Sales projection decreases in 2018 because it is expected that capacity payments under a new contract will be less than half the current amount.

Note 2: Total debt at December 31, 2016 is $80 million.

Note 3: **Reserve Contributions** - These include budgeted contributions or draws to/from the Operating Reserve as well as annual capital projects in years 2017-2021.

Adopted 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Total 2017-2021
43,308,000	36,694,000	37,581,000	38,467,000	39,354,000	195,404,000
100,000	100,000	100,000	100,000	100,000	500,000
43,408,000	36,794,000	37,681,000	38,567,000	39,454,000	195,904,000
5,400	5,500	5,600	5,700	5,800	28,000
74,600	76,800	78,900	81,000	83,100	394,400
69,000	70,700	72,500	74,400	76,400	363,000
149,000	153,000	157,000	161,100	165,300	785,400
12,126,980	12,612,000	13,116,000	13,641,000	14,187,000	65,682,980
4,651,211	4,837,000	5,030,000	5,231,000	5,440,000	25,189,211
1,741,251	1,929,000	4,468,000	3,669,000	3,101,000	14,908,251
1,674,570	2,152,000	2,238,000	2,328,000	2,421,000	10,813,570
564,500	535,000	556,000	578,000	601,000	2,834,500
20,758,512	22,065,000	25,408,000	25,447,000	25,750,000	119,428,512
5,690,730	5,690,730	5,690,730	5,690,730	5,690,730	28,453,650
					-
26,598,242	27,908,730	31,255,730	31,298,830	31,606,030	148,667,562
-	-	-	-	-	-
-	-	-	-	-	-
16,809,758	8,885,270	6,425,270	7,268,170	7,847,970	47,236,438
16,809,758	8,885,270	6,425,270	7,268,170	7,847,970	47,236,438
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

MIDDLE FORK PROJECT FINANCE AUTHORITY
Reserve Schedule
Years 2016 - 2021

	Adopted 2016	Projection 2016
Operating Reserve [First Priority - (Note 1)]:		
Full Funding Target (1 Year Ops Budget)	$ 27,273,000	25,750,000
Reserve, Beginning of Year	25,364,886	25,364,886
Contribution	396,844	385,114
Balance End of Year	$ 25,761,730	25,750,000
Amount Needed to Meet Target, if any	$ (1,511,270)	-
Emergency Reserve [Second Priority - (Note 2)]:		
Target Level of Reserve (Insurance/Debt/Cash)	$ 2,000,000	2,000,000
Reserve, Beginning of Year	$ -	-
Contribution	-	2,000,000
Balance End of Year	$ -	2,000,000
Capital Reserve [Third Priority - (Note 3-sinking fund implemented in 2014)]:		
Target Amounts:		
Capital Reserve, Beginning of Year	$ 27,457,500	27,457,500
Target Contribution based on 5-year Capital Plan Funding Matrix	13,959,833	13,959,833
Capital Plan Approved Projects - Current Year	(12,618,000)	(12,618,000)
Target Ending Balance	$ 28,799,333	28,799,333
Budget Amounts:		
Beginning Balance	$ -	-
Contribution	12,618,000	14,896,730
Use/Appropriated to Projects	(12,618,000)	(12,618,000)
Balance End of Year	$ -	2,278,730
Amount Needed to Meet Target, if any	$ (28,799,333)	(26,520,603)
Total Reserve Balance	**$ 25,761,730**	**30,028,730**

General Note: The colored amounts are to signify certain elements: Blue = Target Funding; Black = Actual or Projected amounts based on annual budgets; Red = Target amounts needed.

Note 1: The **Operating Reserve** is based on the largest projected annual operating budget in the next 5 years.

Note 2: The current **Emergency Reserve** strategy is to initially fund the reserve with $2,000,000 to provide immediate and designated funds for deductible(s) and seed monies to commence any significant unforeseen capital expenditures, thus enabling PCWA to respond immediately to the emergency condition. PCWA will annually assess the level of Emergency Reserve, balancing the trade off between insurance emergency reserve funds and alternative funding, and propose recommended changes as needed.

Note 3: The **Capital Reserve Funding Target** is based on the 5-year Capital Plan with the target amount determined by fully funding the current and subsequent year, and the remaining years (years 3-5) are funded over one-half, one-third, and one-quarter their annual amounts respectively.

Adopted 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021
25,750,000	25,750,000	25,750,000	25,750,000	25,750,000
25,750,000	25,750,000	25,750,000	25,750,000	25,750,000
-	-	-	-	-
25,750,000	25,750,000	25,750,000	25,750,000	25,750,000
-	-	-	-	-
2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
-	-	-	-	-
2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
28,799,333	16,170,416	19,242,833	19,918,250	17,223,000
3,032,084	10,371,417	8,139,417	6,555,750	6,000,000
(15,661,000)	(7,299,000)	(7,464,000)	(9,251,000)	(8,223,000)
16,170,417	19,242,833	19,918,250	17,223,000	15,000,000
2,278,730	3,427,488	5,013,758	3,975,028	1,992,198
16,809,758	8,885,270	6,425,270	7,268,170	7,847,970
(15,661,000)	(7,299,000)	(7,464,000)	(9,251,000)	(8,223,000)
3,427,488	5,013,758	3,975,028	1,992,198	1,617,168
(12,742,929)	(14,229,075)	(15,943,222)	(15,230,802)	(13,382,832)
31,177,488	**32,763,758**	**31,725,028**	**29,742,198**	**29,367,168**

PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2017-2021

Project No.	Project Description	Project Lead	Project Type	Total Estimated Project Cost *(Note 1)*
MINOR PROJECTS - TOTAL				
MAJOR PROJECTS - AUTHORIZED:				
14007P	French Meadows Powerhouse Reliability Upgrades	PWR	Plant	Ongoing
14008P	IBay Sediment Removal and Powerhouse Tailrace Rock Removal	PWR	Dam	2,545,000
14009P	Middle Fork Powerhouse Reliability Upgrades	PWR	Plant	Ongoing
14010P	Oxbow Powerhouse Reliability Upgrades	PWR	Plant	Ongoing
12015A	Project Wide Communications Upgrade	PWR	Communications	13,853,000
08007A	Project Wide Standard Operating Plan and Procedures	PWR	Planning	2,480,000
14012P	Ralston Powerhouse Reliability Upgrades	PWR	Plant	Ongoing
14013P	FERC License Implementation - Project Infrastructure	PWR	Plant	28,464,000
14014P	FERC License Implementation - Project Recreation Facilities	ENG	Environmental	16,686,000
	Afterbay Sediment Removal and Boat Launch Improvements	PWR	Plant	3,500,000
	SUBTOTAL - MAJOR AUTHORIZED PROJECTS			
	TOTAL CAPITAL PROJECTS			

Note 1: Major Projects may be comprised of a variety of sub-projects for which appropriations will be allocated, administered and accounted for as separate "Projects" at the PCWA project management level, as PCWA is the lead entity for MFP projects. For budgeting purposes, the **Total Estimated Project Cost** for the powerhouse reliability projects is defined as **"Ongoing"** because underlying sub-projects will be added, completed and removed over time. Stand alone Project Cost estimates are continually updated as the scope of the project may evolve over time.

Adopted 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	TOTAL 2017-2021
$ 1,825,000	**850,000**	**600,000**	**900,000**	**100,000**	**4,275,000**
750,000	1,100,000	1,550,000	100,000	-	3,500,000
-	-	-	400,000	30,000	430,000
850,000	2,050,000	2,082,000	-	-	4,982,000
350,000	100,000	500,000	1,000,000	100,000	2,050,000
7,500,000	-	-	-	-	7,500,000
250,000	250,000	-	-	-	500,000
200,000	1,750,000	1,150,000	550,000	-	3,650,000
3,571,000	1,123,000	1,560,000	6,268,000	4,381,000	16,903,000
365,000	76,000	22,000	33,000	112,000	608,000
-	-	-	-	3,500,000	3,500,000
13,836,000	**6,449,000**	**6,864,000**	**8,351,000**	**8,123,000**	**43,623,000**
$ 15,661,000	**7,299,000**	**7,464,000**	**9,251,000**	**8,223,000**	**47,898,000**

PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2017-2021

Minor Projects - Total

Minor Projects - Total is comprised of the following sub-projects:

1. Enterprise Resource Planning System
2. Existing Project Adjustment Fund
3. French Meadows Forest Management
4. Hell Hole Substation Rebuild
5. Hillside Slope Stability - Middle Fork American River Project
6. New Project Development Fund
7. Penstock Protection
8. Project Wide Security Surveillance Improvements

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 1,825,000	850,000	600,000	900,000	100,000	4,275,000

Minor Projects are defined as projects with a total estimated project cost equal to or less than $1 million dollars and are included in the MFPFA Capital Plan as one total amount. This amount is comprised of a variety of sub-projects that will be allocated, administered and accounted for as "Projects" through PCWA's budget and accounting system, as PCWA is the lead entity for MFP projects.

PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2017-2021

French Meadows Powerhouse Reliability Upgrades

Project Number: 14007P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Plant

Powerhouse reliability upgrades encompass projects that will sustain or increase generator availability (the percentage of time a generator is available to be synchronized to the grid and produce electricity) and projects that will improve employee safety.

1. Turbine Governor Upgrades
2. 125VDC Station Battery Bank Replacement
3. Unit Control Board Upgrade
4. Station Battery Room Addition
5. Cooling and Sump Pumps Control Upgrade
6. Generator Excitation System Replacement
7. Generator Protection Upgrade
8. Powerhouse Road Resurfacing
9. Penstock Coupling Investigation

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 750,000	1,100,000	1,550,000	100,000	-	3,500,000

This project is a Major Project, or project category, with a total estimated project cost at more than $1 million, as defined by MFPFA policy as Potential, Planned or Authorized. Major Projects may be comprised of a variety of sub-projects that will be allocated, administered and accounted for as separate “Projects” through PCWA’s accounting system, as PCWA is the lead entity for MFP projects.

IBay Sediment Removal and Powerhouse Tailrace Rock Removal

Project Number: 14008P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Dam

This project will consist of a limited sediment removal from the upstream end of Middle Fork Powerhouse to several hundred feet downstream of the powerhouse. A ramp into the reservoir may need to be developed, the reservoir drained down over ten feet, submersible pumps, redundant generators and bypass pipes set up around the work area, excavation in the dewatered work area using excavators and rock trucks, and transport of the excavation debris to an upland disposal site to be determined. A bathymetric survey has been conducted.

Alternatively, use of a floating multi-function dredge, or a crane and clamshell arrangement should be investigated, since this may save considerable water bypass costs, and may result in only “incidental fallback”, which may reduce permitting requirements substantially.

Interbay Sediment Removal Project

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ -	-	-	400,000	30,000	430,000

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Middle Fork Powerhouse Reliability Upgrades

Project Number: 14009P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Plant

Powerhouse reliability upgrades encompass projects that will sustain or increase generator availability (the percentage of time a generator is available to be synchronized to the grid and produce electricity) and projects that will improve employee safety.

1. Cooling and Sump Pumps Control Upgrade
2. Switchyard Grounding Well Addition
3. HVAC Upgrade
4. Switchyard Upgrades
5. Penstock Coupling Investigation

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 850,000	2,050,000	2,082,000	-	-	4,982,000

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Oxbow Powerhouse Reliability Upgrades

Project Number: 14010P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Plant

Powerhouse reliability upgrades encompass projects that will sustain or increase generator availability (the percentage of time a generator is available to be synchronized to the grid and produce electricity) and projects that will improve employee safety.

1. Station Battery Room Addition
2. Turbine Governor Upgrades
3. Unit Control Board Upgrades
4. Generator Excitation System Replacement
5. Generator Protection Upgrade
6. 125VDC Station Battery Bank Replacement
7. HVAC Upgrade

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 350,000	100,000	500,000	1,000,000	100,000	2,050,000

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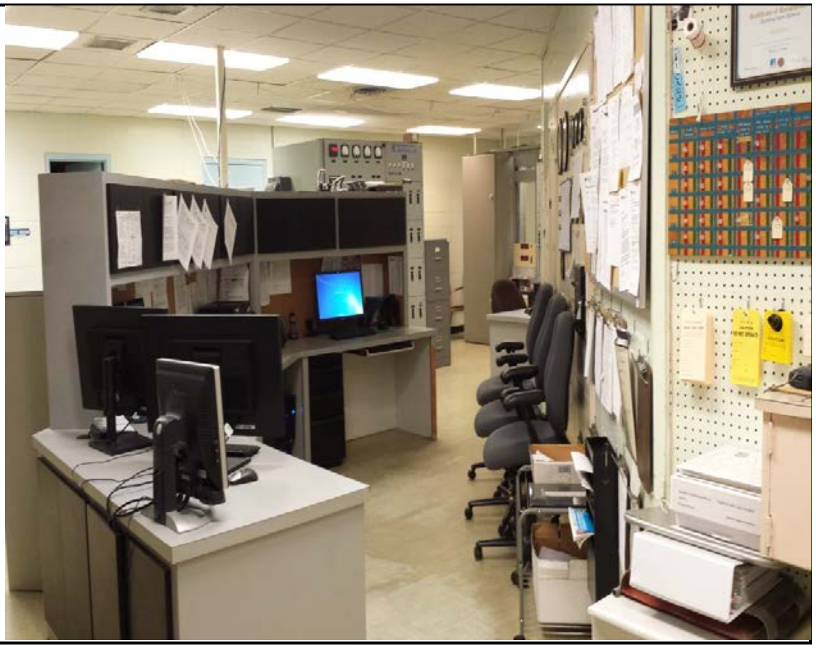
Project Wide Communications Upgrade

Project Number: 12015A
Project Category: Major-Authorized
Project Lead: Power
Project Type: Communications

This project will add redundancy and increase the robustness of the Middle Fork Project communications system that connects the powerhouses and control center (currently a PG&E facility) together. The Agency's Foresthill Facilities Center, the Auburn Business Center, and the California Independent System Operator (CAISO) would also be part of the upgraded system.



Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 7,500,000	-	-	-	-	7,500,000

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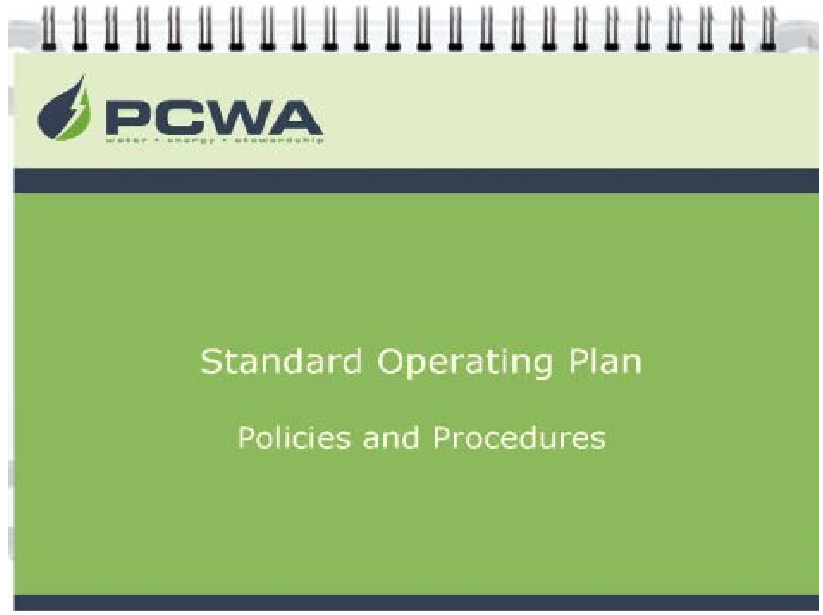
Project Wide Standard Operating Plan and Procedures

Project Number: 08007A
Project Category: Major-Authorized
Project Lead: Power
Project Type: Planning

This project will verify, validate, revise and implement the following:

1. Middle Fork Project Standard Operating Procedures (SOP)
2. OSHA required Lock Out and Tag Out (LOTO) procedures
3. High Voltage Clearance procedures
4. Preventive and Predictive Maintenance procedures for use in the Computerized Maintenance Management System (CMMS)
5. Power System Department administrative procedures



Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 250,000	250,000	-	-	-	500,000

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Ralston Powerhouse Reliability Upgrades

Project Number: 14012P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Plant

Powerhouse reliability upgrades encompass projects that will sustain or increase generator availability (the percentage of time a generator is available to be synchronized to the grid and produce electricity) and projects that will improve employee safety.

1. Upper Penstock Access Improvements
2. Generator Excitation System Replacement
3. Tunnel Intake Trash Rack Cleaner Upgrade
4. HVAC Upgrade
5. Switchyard Upgrades
6. Penstock Coupling Investigation

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 200,000	1,750,000	1,150,000	550,000	-	3,650,000

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FERC License Implementation - Project Infrastructure

Project Number: 14013P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Plant

These capital projects consist of infrastructure work required under the new FERC license. The work includes:

1. Dam Low Level Outlet Upgrades
2. Diversion Upgrades
3. Hell Hole Seasonal Storage
4. Hell Hole Dam Crest Improvements
5. LL Anderson Dam Spillway Instrumentation Improvements
6. Project Wide Road Improvements
7. LL Anderson Dam Spillway Electrical Upgrades
8. French Meadows Powerhouse Penstock
9. Oxbow Powerhouse Penstock


Long Canyon Diverson Dam

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 3,571,000	1,123,000	1,560,000	6,268,000	4,381,000	16,903,000

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FERC License Implementation - Project Recreation Facilities

Project Number: 14014P
Project Category: Major-Authorized
Project Lead: Engineering
Project Type: Environmental

This project consists of work to rehabilitate recreational facilities that will be required by the new FERC license. The work includes:

1. Afterbay Picnic Area, Cartop Boat Ramp, MF Stream Gage Trail Improvements, and Indian Bar Access Area
2. French Meadows Boat Ramp Extension and Picnic Area
3. French Meadows RV Dump Station and Campground
4. French Meadows South Shore Water Supply
5. Hell Hole Boat Ramp Extension and Parking, General Parking, and Potable Water
6. Hell Hole Upper Campground
7. Middle Fork Public Access around Powerhouse
8. Middle Meadows Campground Spring Water Source Upgrade

French Meadows Campground

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ 365,000	76,000	22,000	33,000	112,000	608,000

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Afterbay Sediment Removal and Boat Launch Improvements

Project Number:
Project Category: Major-Authorized
Project Lead: Power
Project Type: Plant

Accumulated sediments in Ralston Afterbay Reservoir must be removed to maintain system function. Historically, sediment has been removed on average every 5 years. However, no sediment management activities have taken place at Ralston Afterbay since 2002. Additionally, Ralston Afterbay is now more prone to sedimentation due to the King Fire.

The new FERC license will require improvements to the Ralston Afterbay Sediment Removal Access Point (boat ramp) upon the first sediment removal following the issuance of the new license.

Costs related to debris and sediment management are estimated based on past experience, with the caveat that the size, scope and severity of the King Fire burn area represents an unprecedented condition. The need and timing of this project is uncertain and dependent primarily on weather and runoff conditions in the Rubicon River watershed.

Funding Source	2017 Adopted	2018 Projected	2019 Projected	2020 Projected	2021 Projected	Total
Middle Fork Project Finance Authority	$ -	-	-	-	3,500,000	3,500,000

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Middle Fork Project
Finance Authority