



MIDDLE FORK PROJECT
FINANCE AUTHORITY



Budget 2018

Hell Hole Spillway - April 2017



MIDDLE FORK PROJECT FINANCE AUTHORITY

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 2017*

Placer County Board of Supervisors

- Jim Holmes**
- Robert Weygandt

Placer County Water Agency

- Primo Santini***
- Mike Lee

** Chair for 2017

*** Vice Chair for 2017

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 2018 Budget**

Approved by Authority Board of Directors October 19, 2017

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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 19, 2017

RE: Adopted 2018 MFP Finance Authority Annual Budget

Overview

Attached herewith is the Adopted 2018 Middle Fork Project Finance Authority Budget, totaling \$40.4 million, which is comprised of a \$28.2 million operating budget and a \$12.2 million capital budget. The 5-year Budget is provided with 2017 (adjusted and projection), the 2018 Budget (amounts **bolded**), as well as the following four years (2019 - 2022) in the following attached schedules:

- Summary Budget Schedule Years 2017 - 2022
- Budget Schedule Years 2017 - 2022
- Reserve Schedule Years 2017 - 2022
- MFP Capital Plan as funded by the Authority 2018 - 2022

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 2017, discussion and analysis, and other background information.

2018 Adopted Budget - Overview

The following provides an overview of the 2018 adopted Middle Fork Project Finance Authority Budget:

The adopted 2018 Power Sales revenue decreased by 8%, or \$3.6 million from 2017. This decrease is a result of California energy market changes that have driven down the value of both resource adequacy capacity and renewable energy credits (REC's). Combined, the value of these two products have dropped by 65% in the 6 years since the PG&E PPA was

executed. On December 31, 2017 the PG&E PPA expires, which was a bundled contract for all energy products the Middle Fork Project produces. Future energy contracts, with qualified and approved counterparties, will be unbundled into separate product agreements for: energy, resource adequacy capacity, renewable energy credits, and carbon-free attributes.

Power sales (energy component) have been budgeted in accordance with the Authority's policy and consistent with prior year budgetary practices, at 80% of average hydrology (over the past 50 years) and reasonable energy market price projections.

The 2018 **Operating Budget Expenditures** are increased by 5.8% or \$1.5 million compared with the Adjusted 2017 Operating Budget. The following discussion provides a comparison between the Adjusted 2017 Budget and the Adopted 2018 Budget for the Operating Budget Expenditures:

Administration:

2018 budgeted amounts are similar to 2017 Budget with a slight decrease in professional services expenses of \$19,000.

PCWA Power Division – Operating:

Power Operations is increased at 8%, or \$1.5 million over the 2017 Operating Budget. Increases were most significant in the Power System Operating Budget totaling \$1,212,000. Included in this increase is \$500,000 for the NCPA services agreement executed in June 2016, in which NCPA will provide, control center and other services to the Agency effective January 1, 2018. Personnel, health care, and other benefits increased the budget by \$293,000. Operating and safety supplies, along with supplies for a warehouse reorganization total \$128,000, while Federal Energy Regulatory Commission (FERC) costs, rock fall protection, facility repair, equipment rental, and other expenses contributed another \$291,000.

General and Administrative is increased by a net \$56,000, or 1.2%, due to additional support services (service level support) from the CPI increase as part of the cost allocation plan.

Natural Resource Management is increased by \$36,000, or 2%, which is primarily attributable to additional consulting services associated with the FERC license compliance projects that are operational in nature. The FERC License is currently projected to be issued in 2019. 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 Eldorado and Tahoe National Forests where project recreational facilities are located.

Power Resources Management is the appropriations for the energy marketing activities and is expected to be similar to 2017 Budget amounts. At the date of this memo, there are some organizational changes in the works, which may impact the 2018 Budget, however, the specific impact is not fully known at this time. This may result in 2018 Budget amendment being required at a later time once the information is known.

Routine Capital is increased by \$245,000. The 2018 needs for the replacement of the work boat, various trucks and additional maintenance equipment are the primary drivers. The Routine Capital Budget is for the purchase of replacement or new vehicles and equipment with varying annual and other needs.

Debt Service is the same as the Adjusted 2017 Budget with semi-annual principal and interest payments of \$2.8 million.

Capital Plan – The 2018 Capital Projects appropriations and 5-Year Capital Plan reflect necessary additional investments in infrastructure, as determined by three significant factors: the age of the existing capital infrastructure, the revenue benefits that derive from being available to generate energy at all times for the California energy market, and the requirements of the new FERC license, which is anticipated to be issued in early 2019.

The 2018 MFP Capital Plan appropriations total \$12.2 million, and include the following capital expenditures:

- \$6.4 million for Powerhouse Reliability Upgrades,
 - \$2.2 million for FERC License Implementation-Project Infrastructure,
 - \$0.1 million for FERC License Implementation-Recreation Facilities,
 - \$1.0 million for 2017 Sediment Removal,
 - \$2.5 million for various other projects.
- \$12.2 million total

As in the past couple of annual Authority Budgets, the 2018 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 \$10.5 million or 27% 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 75% reduction in the adopted 2015 capital budget caused by poor hydrology, upgrade or enhancement capital projects will extend beyond the 2018 5-year Capital Plan.

The second category of Renewal, Replacement and Reliability Projects total \$9.7 million or 25% of the 5-year amount.

The FERC License Implementation Projects are also “one-time” capital projects which total \$18.2 million or 47% 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 2019, the FERC implementation capital projects will extend beyond the 2018 5-year Capital Plan.

For years beyond 2022, 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.

Reserves – 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 reserve levels. 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 \$25.75 million, approximately one year of operating expenses.

Emergency Reserve: Emergency Reserve target is based on the total amount of emergency funds considered necessary under a severe outage contingency and will be

evaluated with other funding/financing resources. The emergency reserve target is currently set at \$2.0 million for insurance deductible and other immediate needs.

Capital Reserve: Capital reserve funding target is currently set at a fixed amount of \$20 million to ensure proper resource planning for needs of capital improvements will be met on a long-term basis.

Per Policy, the Operating reserve is to be fully funded prior to funding the Emergency and Capital reserves. Based on the 2017 Projection, the Operating reserve will continue to be funded to its target level of \$25.8 million as will the Emergency reserve to its target level of \$2.0 million. An increase in the appropriations in 2017 from the Capital reserve to address sediment removal will allow for the Capital Reserve to be funded to approximately \$15.4 million. The Capital reserve will function as a “sinking-fund” for annual capital project appropriations and thus help supplement capital project funding. All Reserves will be fully funded or nearly fully funded in 2017.

Five Year Budget Schedule (2018 – 2022)

In the Budget Schedule, Power Sales revenue exhibits a decline 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 \$9 million from the 2017 5-year Capital Plan to \$38.4 million as projects have completed and future projects are pushed out, as well as refinements to the upgrades projects to meet resource needs along with the FERC license implementation projects shifting back as the license is delayed. The 2018 5-Year Budget is expected to use the Capital Reserves for years 2018 - 2020 slightly and during years 2021 – 2022 the Capital Reserves are replenished and are expected to be fully funded by the end of 2022.

MIDDLE FORK PROJECT FINANCE AUTHORITY
Summary Budget Schedule
Years 2017 - 2022

	2017	
	Adjusted 2017	Projection 2017
Revenues and Other Financing Sources	\$ 43,408,000	55,200,000
Expenditures, Appropriations and Other Uses:		
Administration	149,000	149,000
PCWA Power Division - Operating	20,758,512	20,758,512
Appropriation to Capital Projects (through Capital Reserve) See detail below	22,311,000	22,311,000
Debt Service	5,690,730	5,690,730
Total Expenditures and Appropriations	48,909,242	48,909,242
Reserve Funding:		
Operating Reserves	-	-
Emergency Reserves	-	-
Capital Reserves	(5,501,242)	6,290,758
Total Reserve Funding	(5,501,242)	6,290,758
Net Revenue	\$ -	-

Detail of Capital Projects:

Upgrades
Renewal, Replacement and Reliability
FERC License Implementation Projects
Total Appropriations to Capital Projects

For years beyond 2022, ongoing capital projects are estimated to be approximately \$6 million/year.

Estimated Year-end Reserve Balances:

Operating Reserve (target is \$25.8 million)	\$ 25,750,000	25,750,000
Emergency Reserve (target is \$2 million)	2,000,000	2,000,000
Capital Reserve * (long-term target is \$20 million)	3,559,783	15,351,783
Total Estimated Year-end Reserve Balances	\$ 31,309,783	43,101,783

* The Capital Reserve funding target is a fixed target of \$20 million.

2018 & 2019		Future Years			Total 2018-2022
Adopted 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	
39,932,000	38,249,000	38,438,000	40,805,000	41,651,000	199,075,000
122,000	125,500	128,900	132,400	136,000	644,800
22,276,163	25,127,000	25,912,000	26,233,000	25,991,000	125,539,163
12,246,000	9,144,000	8,542,000	5,196,000	3,286,000	38,414,000
5,690,730	5,690,730	5,690,730	5,690,730	5,690,730	28,453,650
40,334,893	40,087,230	40,273,630	37,252,130	35,103,730	193,051,613
-	-	-	-	-	-
-	-	-	-	-	-
(402,893)	(1,838,230)	(1,835,630)	3,552,870	5,172,100	4,648,217
(402,893)	(1,838,230)	(1,835,630)	3,552,870	5,172,100	4,648,217
-	-	-	-	1,375,170	1,375,170
\$ 4,930,000	4,082,000	1,170,000	100,000	220,000	10,502,000
5,000,000	3,000,000	525,000	675,000	100,000	9,300,000
2,316,000	2,062,000	6,447,000	4,421,000	2,966,000	18,212,000
\$ 12,246,000	9,144,000	8,142,000	5,196,000	3,286,000	38,014,000
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	
14,948,890	13,110,660	11,275,030	14,827,900	20,000,000	
42,698,890	40,860,660	39,025,030	42,577,900	47,750,000	

MIDDLE FORK PROJECT FINANCE AUTHORITY

Budget Schedule

Years 2017 - 2022

	Adjusted 2017	Projection 2017
Revenues and Other Financing Sources:		
Power Sales <i>(Note 1)</i>	\$ 43,308,000	55,000,000
Interest Income	100,000	200,000
Total Revenues and Other Financing Sources	43,408,000	55,200,000
Expenditures and Other Uses:		
Administration:		
Operating Supplies/Services	5,400	5,400
Administration	74,600	74,600
Professional Services	69,000	69,000
Total Administration Expenditures	149,000	149,000
PCWA Power Division - Operating:		
Power Operations	12,126,980	12,126,980
General and Administrative	4,651,211	4,651,211
Natural Resources Management	1,741,251	1,741,251
Power Resources Management	1,674,570	1,674,570
Routine Capital	564,500	564,500
Total PCWA Power Division - Operating	20,758,512	20,758,512
Debt Service <i>(Note 2)</i>	5,690,730	5,690,730
Total Operating Expenditures	26,598,242	26,598,242
Reserve Contributions:		
Operating Reserves	-	-
Emergency Reserves	-	-
Capital Reserves	16,809,758	28,601,758
Total Reserve Funding	16,809,758	28,601,758
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 \$17.8 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 2018-2022 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, 2017 is \$77 million.

Adopted 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Total 2018-2022
39,732,000	38,049,000	38,238,000	40,605,000	41,451,000	198,075,000
200,000	200,000	200,000	200,000	200,000	1,000,000
39,932,000	38,249,000	38,438,000	40,805,000	41,651,000	199,075,000
2,000	2,100	2,200	2,300	2,400	11,000
70,000	72,100	74,100	76,100	78,100	370,400
50,000	51,300	52,600	54,000	55,500	263,400
122,000	125,500	128,900	132,400	136,000	644,800
13,338,986	13,873,000	14,428,000	15,005,000	15,605,000	72,249,986
4,707,710	4,896,000	5,092,000	5,296,000	5,508,000	25,499,710
1,777,042	3,964,000	3,903,000	3,343,000	2,185,000	15,172,042
1,642,425	1,708,000	1,776,000	1,847,000	1,921,000	8,894,425
810,000	686,000	713,000	742,000	772,000	3,723,000
22,276,163	25,127,000	25,912,000	26,233,000	25,991,000	125,539,163
5,690,730	5,690,730	5,690,730	5,690,730	5,690,730	28,453,650
28,088,893	30,943,230	31,731,630	32,056,130	31,817,730	154,637,613
-	-	-	-	-	-
-	-	-	-	-	-
11,843,107	7,305,770	6,706,370	8,748,870	8,458,100	43,062,217
11,843,107	7,305,770	6,706,370	8,748,870	8,458,100	43,062,217
-	-	-	-	1,375,170	1,375,170
-	-	-	-	343,792	343,792
-	-	-	-	343,793	343,793
-	-	-	-	687,585	687,585
-	-	-	-	1,375,170	1,375,170
-	-	-	-	-	-

MIDDLE FORK PROJECT FINANCE AUTHORITY

**Reserve Schedule
Years 2017 - 2022**

	Adjusted 2017	Projection 2017
	<u>2017</u>	<u>2017</u>
Operating Reserve [First Priority - (Note 1)]:		
Reserve, Beginning of Year	\$ 25,750,000	25,750,000
Contribution	-	-
Use of Operating Reserve	-	-
Balance End of Year	<u>\$ 25,750,000</u>	<u>25,750,000</u>
Emergency Reserve [Second Priority - (Note 2)]:		
Reserve, Beginning of Year	\$ 2,000,000	2,000,000
Contribution	-	-
Use of Operating Reserve	-	-
Balance End of Year	<u>\$ 2,000,000</u>	<u>2,000,000</u>
Capital Reserve [Third Priority - (Note 3-sinking fund implemented in 2014)]:		
Budget Amounts:		
Beginning Balance	\$ 9,061,025	9,061,025
Contribution	16,809,758	28,601,758
Use/Appropriated to Projects	(22,311,000)	(22,311,000)
Balance End of Year	<u>\$ 3,559,783</u>	<u>15,351,783</u>
Amount Needed to Meet Target, if any	<u>\$ (16,440,217)</u>	<u>(4,648,217)</u>
Total Reserve Balance	<u>\$ 31,309,783</u>	<u>43,101,783</u>

Note 1: The **Operating Reserve** is currently set at a fixed amount of \$25.8 million.

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 currently set at a fixed amount of \$20 million

Adopted 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022
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
15,351,783	14,948,890	13,110,660	11,275,030	14,827,900
11,843,107	7,305,770	6,706,370	8,748,870	8,458,100
(12,246,000)	(9,144,000)	(8,542,000)	(5,196,000)	(3,286,000)
14,948,890	13,110,660	11,275,030	14,827,900	20,000,000
(5,051,110)	(6,889,340)	(8,724,970)	(5,172,100)	-
42,698,890	40,860,660	39,025,030	42,577,900	47,750,000

PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2018-2022

Project No.	Project Description	Project Lead	Project Type	Total Estimated Project Cost (Note 2)	Prior Funding
MINOR PROJECTS - TOTAL					
MAJOR PROJECTS - AUTHORIZED: (Note 1)					
17019W	Enterprise Resource Planning System	ADMIN	Computer Systems	1,802,691	977,691
17004P	French Meadows Forest Management	PWR	Environmental	1,300,000	100,000
14007P	French Meadows Powerhouse Reliability Upgrades	PWR	Plant	Ongoing	1,100,000
14003P	Hell Hole Powerhouse Reliability Upgrades	PWR	Plant	Ongoing	925,000
12003P	Hillside Slope Stability - Middle Fork Project	PWR	Penstock	1,711,245	1,211,245
14009P	Middle Fork Powerhouse Reliability Upgrades	PWR	Plant	Ongoing	1,600,000
14010P	Oxbow Powerhouse Reliability Upgrades	PWR	Plant	Ongoing	800,000
12015A	Project Wide Communications Upgrade	PWR	Communications	15,300,000	14,753,271
17005P	Project Wide Standard Operating Plan and Procedures	PWR	Planning	801,944	551,944
14012P	Ralston Powerhouse Reliability Upgrades	PWR	Plant	Ongoing	4,300,000
14013P	FERC License Implementation - Project Infrastructure	PWR	Plant	28,464,000	11,801,841
14014P	FERC License Implementation - Project Recreation Facilities	ENG	Environmental	16,686,000	2,093,290
17013P	2017 Sediment Removal	PWR	Plant	6,000,000	5,000,000
SUBTOTAL - MAJOR AUTHORIZED PROJECTS					
TOTAL CAPITAL PROJECTS					

Note 1: Major Projects are projects that exceed \$1 million in total estimated project cost. These 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.

Note 2: Total Estimated Project Cost may include prior funding and completed sub-projects. These costs for the powerhouse reliability projects are 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 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	TOTAL 2018-2022
\$ 925,000	375,000	100,000	100,000	100,000	1,600,000
500,000	325,000	-	-	-	825,000
100,000	500,000	500,000	100,000	-	1,200,000
2,675,000	450,000	250,000	100,000	220,000	3,695,000
300,000	700,000	-	-	-	1,000,000
300,000	100,000	100,000	-	-	500,000
2,530,000	2,082,000	20,000	100,000	50,000	4,782,000
350,000	900,000	725,000	475,000	-	2,450,000
500,000	-	-	-	-	500,000
250,000	-	-	-	-	250,000
500,000	1,650,000	500,000	-	50,000	2,700,000
2,174,000	1,560,000	6,268,000	4,381,000	-	14,383,000
142,000	502,000	179,000	40,000	2,966,000	3,829,000
1,000,000	-	-	-	-	1,000,000
11,321,000	8,769,000	8,542,000	5,196,000	3,286,000	37,114,000
\$ 12,246,000	9,144,000	8,642,000	5,296,000	3,386,000	38,714,000

PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2018-2022

Minor Projects - Total

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

1. Existing Project Adjustment Fund
2. New Project Development Fund
3. Penstock Interior Coating Inspection
4. Project Wide Security Surveillance Improvements



Installing new security fence at Ralston Powerhouse

Funding Source		2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority		\$ 925,000	375,000	100,000	100,000	100,000	1,600,000

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
2018-2022

Enterprise Resource Planning System

Project Number: 17019W
 Project Category: Major-Authorized
 Project Lead: Administration
 Project Type: Computer Systems

Power System will pay a share of the costs for the replacement of the Agency's existing Enterprise Resource Planning (ERP) software system. The integrated software includes financials, work orders, inventory, and HR.

1. Implementation
2. Testing
3. Software Licensing



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 1,802,691	500,000	325,000	-	-	-	825,000

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.

PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2018-2022

French Meadows Forest Management

Project Number: 17004P
 Project Category: Major-Authorized
 Project Lead: Power
 Project Type: Environmental

The Agency is partnering with the Tahoe National Forest, The Nature Conservancy, American River Conservancy, and the University of California, Sierra Nevada Research Institute on the French Meadows Forest Resilience Project. The aim of the French Meadows Forest Resilience Project is to increase the pace and scale of forest restoration in a critical municipal watershed, using an approach of ecologically-based forest management.



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 1,300,000	100,000	500,000	500,000	100,000	-	1,200,000

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.

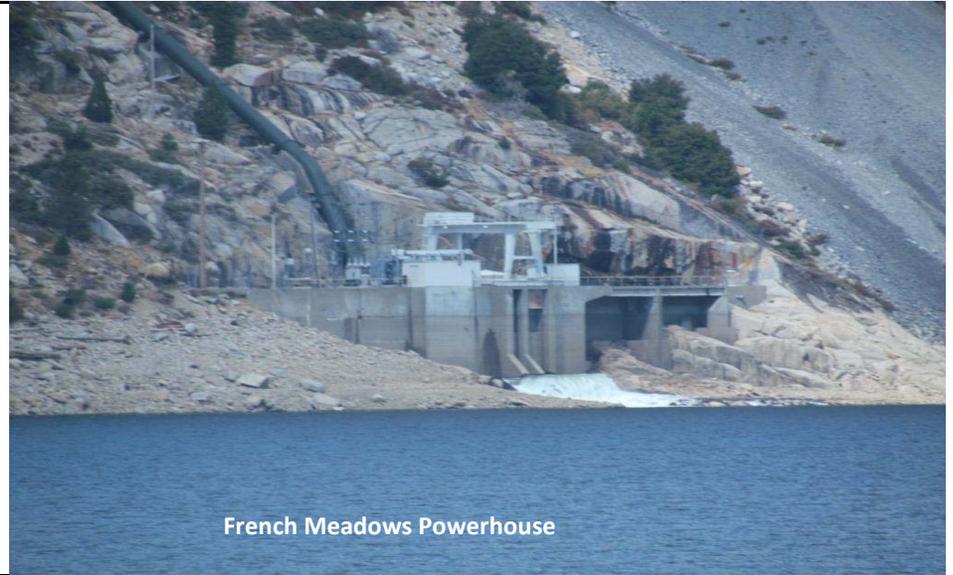
PLACER COUNTY WATER AGENCY
MFP Capital Plan
As Funded by the Middle Fork Project Finance Authority
2018-2022

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
10. Powerhouse HVAC Upgrade



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	Ongoing	\$ 2,675,000	450,000	250,000	100,000	220,000	3,695,000

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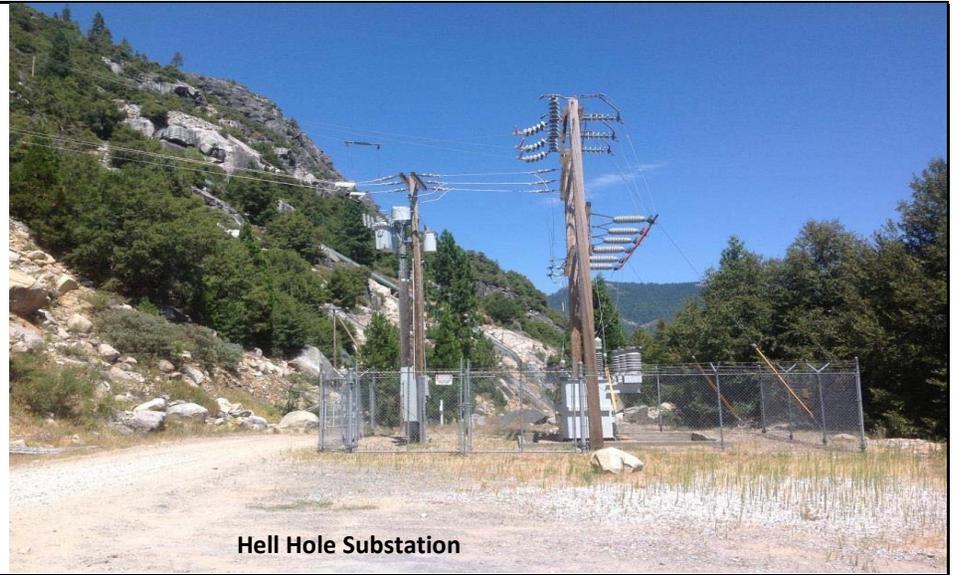
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Hell Hole Powerhouse Reliability Upgrades

Project Number: 14003P
 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. Hell Hole Substation Upgrade



Hell Hole Substation

Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	Ongoing	\$ 300,000	700,000	-	-	-	1,000,000

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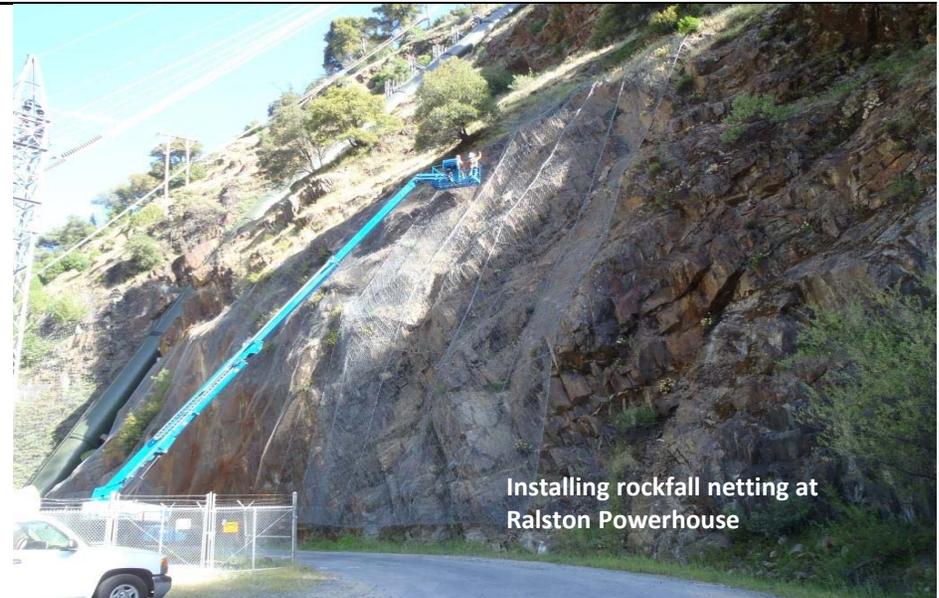
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Hillside Slope Stability - Middle Fork Project

Project Number: 12003P
 Project Category: Major-Authorized
 Project Lead: Power
 Project Type: Penstock

This project covers geotechnical engineering and slope stability work to protect Project infrastructure. This project includes:

1. Monitoring and analysis of rock masses at the Ralston Powerhouse penstock and above the Hell Hole Dam spillway.
2. Middle Fork Penstock Foundation Monitoring Project, which is providing electronic data about potential movement of penstock saddle foundations that are founded on old slide material rather than weathered bedrock.



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 1,711,245	300,000	100,000	100,000	-	-	500,000

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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. Powerhouse HVAC Upgrade
4. High Voltage Switchyard Upgrades
5. Penstock Coupling Investigation



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	Ongoing	\$ 2,530,000	2,082,000	20,000	100,000	50,000	4,782,000

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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. Station 125VDC Battery Bank Replacement
7. Powerhouse HVAC Upgrade



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	Ongoing	\$ 350,000	900,000	725,000	475,000	-	2,450,000

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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.



Foresthill Comm Site

Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 15,300,000	500,000	-	-	-	-	500,000

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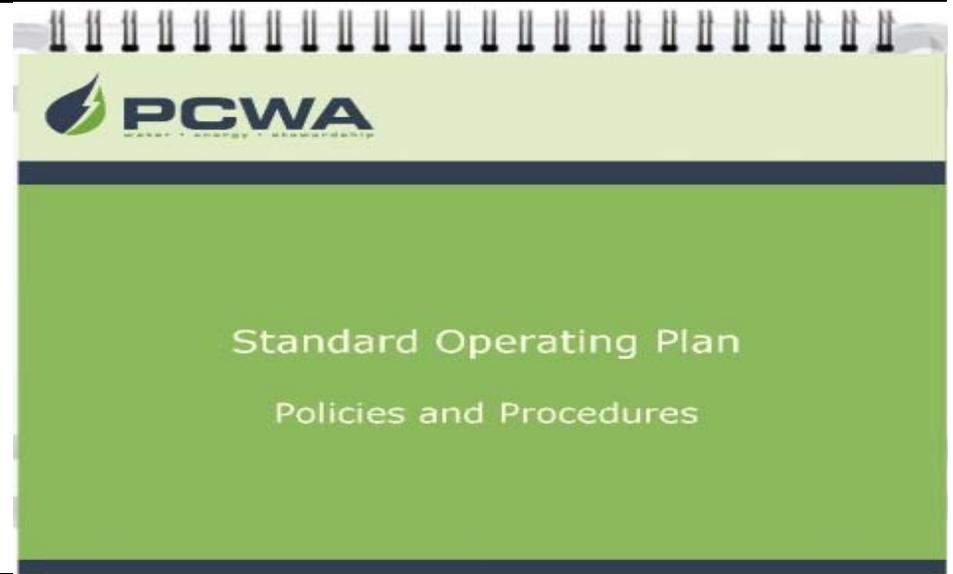
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Project Wide Standard Operating Plan and Procedures

Project Number: 17005P
 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. Preventive and Predictive Maintenance procedures for use in the Computerized Maintenance Management System (CMMS)
3. Power System Department administrative procedures



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 801,944	250,000	-	-	-	-	250,000

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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. Tunnel Intake Trash Rack Cleaner Upgrade
3. Powerhouse HVAC Upgrade
4. High Voltage Switchyard Upgrades
5. Penstock Coupling Investigation



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	Ongoing	\$ 500,000	1,650,000	500,000	-	50,000	2,700,000

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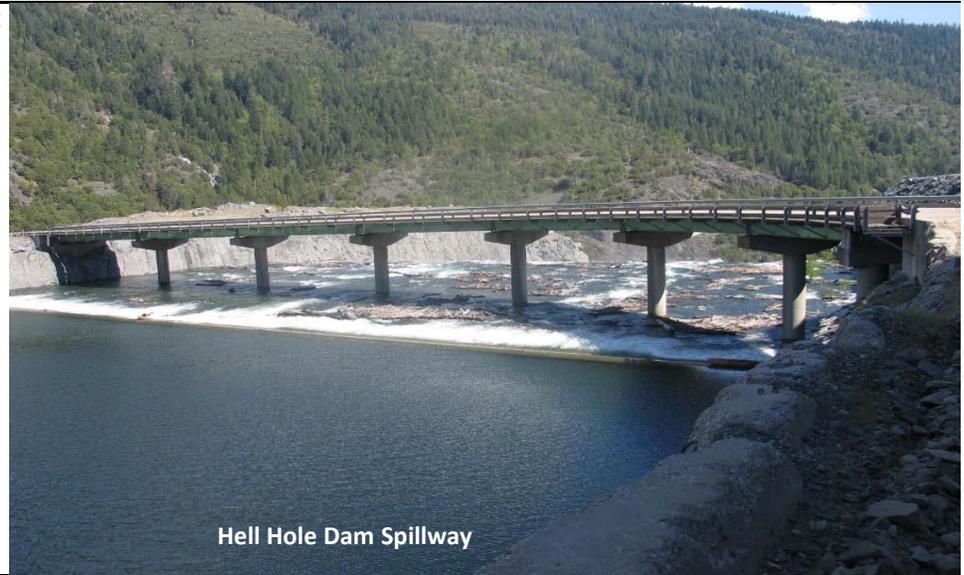
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FERC License Implementation - Project Infrastructure

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 Core Raise
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



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 28,464,000	\$ 2,174,000	1,560,000	6,268,000	4,381,000	-	14,383,000

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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



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 16,686,000	\$ 142,000	502,000	179,000	40,000	2,966,000	3,829,000

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2017 Sediment Removal

Project Number: 17013P
 Project Category: Major-Authorized
 Project Lead: Power
 Project Type: Plant

The project includes removing accumulated sediment from two regulating reservoirs (Ralston Afterbay and Interbay) and two diversion pools (North Fork and South Fork Long Canyon Diversions) within the Middle Fork American River Hydroelectric Project. Work in Ralston Afterbay and Interbay will be limited to a five-week-long system outage in October 2018 when reservoir levels can be lowered. Work within North Fork and South Fork Long Canyon Diversions is anticipated to occur concurrently, however it is not strictly limited to the same outage. Work in the two diversions must be completed while creek flows are low and before winter weather restricts access. Included in the work for all sites will be sediment excavation, hauling, processing, and placement at select sacrificial sediment augmentation locations, permanent fill embankment, and temporary fill embankment locations.



Funding Source	Total Estimated Project Cost	2018 Adopted	2019 Projected	2020 Projected	2021 Projected	2022 Projected	Total
Middle Fork Project Finance Authority	\$ 6,000,000	\$ 1,000,000	-	-	-	-	1,000,000

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MIDDLE FORK PROJECT
FINANCE AUTHORITY