MIDDLE FORK PROJECT
FINANCE AUTHORITY

Middle Fork Power House

Budget

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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 2014*

Placer County Board of Supervisors

- Jim Holmes**
- Robert Weygandt

Placer County Water Agency

- Primo Santini
- Mike Lee***

** Chair for 2014

*** Vice Chair for 2014

Officers of MFP Finance Authority

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

***Sitting Board who approved the 2015 Budget**

Approved by Authority Board of Directors October 16, 2014

MIDDLE FORK PROJECT FINANCE AUTHORITY
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2015 BUDGET

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 16, 2014

RE: The Adopted 2015 MFP Finance Authority Annual Budget

Attached herewith is the Adopted 2015 Middle Fork Project Finance Authority Budget, totaling $41.7 million, which is comprised of a $27.6 million operating budget and a $14.1 million capital budget. Pursuant to the Authority's General Financial Policies, the 2015 budget is provided, as well as the four years thereafter, within the following schedules with the 2015 amounts **bolded**:

- Summary Budget Schedule Years 2014 – 2019
- Budget Schedule Years 2014 – 2019
- Reserve Schedule Years 2014 – 2019
- MFP Infrastructure Projects as funded by the Authority 2015 - 2019

In accordance with the Board's General Financial Policies, the budget was prepared with the consultation and involvement of both Agency and Placer County Staff. The 2015 budget drafting process resulted in numerous iterations and various County/Agency team meetings prior to being considered by the Board for adoption, which occurred on October 16, 2014.

The following pages provide additional details regarding background, analysis and discussion, hydrology, budgeting practices, reserve funding, and the expedition of the control center and scheduling coordinator functions.

Background

On May 1, 2014, the Placer County Water Agency (Agency) celebrated the first full year, 12 months, of operations under the new Power Purchase Agreement (2013 PPA) with Pacific Gas and Electric Company (PG&E). The 2013 PPA is a 4 year 8 month agreement that expires on December 31, 2017. Under the prior PPA, a 50 year contract with PG&E (1963 PPA) that ended on April 30, 2013, PG&E was financially responsible for the operation, maintenance and capital improvement of the Middle Fork Project (MFP), as well as receiving all of the energy sales benefits of the MFP. The 2013 PPA shifts the responsibility and benefits whereby the Agency now is financially responsible for the operations, maintenance and capital improvements and in turn is compensated by selling energy products to PG&E and the California energy market. The Joint Exercise of Powers Agreement that established the Middle Fork Project Finance Authority (Authority) set forth a number of requirements for budgeting and expenses, including funds received from the sales of MFP electrical energy flowing directly to the Authority beginning May 1, 2013.

2015 Budget Management Discussion and Analysis

The 2015 Middle Fork Project Finance Authority Budget has been refined to meet the anticipated financial needs of 2015 and the subsequent 4 years. The following provides a brief overview analysis.

MFP Revenue is conservatively budgeted with the **Power Sales** budget amount, in accordance with policy and consistent with prior year budget practices, at 80% of average. This approach is intended to be conservative. However, if average Power Sales, rather than 80% of average, were realized for years 2016 - 2019, then reserves would be funded to their target levels during 2018. This would mean that distributions and additional bond principal payments potentially could be made in 2018 and beyond, assuming other budget items were consistent or at a favorable variance.

The Adopted 2015 Budget overall **Operating Expenditures** increases 3.6% or $800,000 over the 2014 Adjusted Budget. The primary reason for this increase is the additional resources for the power scheduling functions and continued implementation of resources that had previously been provided by PG&E under the 1963 PPA (consulting, forecasting and enhanced market monitoring tools, legislative and regulatory matters). The 2015 Budget includes an additional 7 positions as follows: 2 Power System Operators (Power Operations- half year budgeted), 1 Information Services Analyst* (Power Operations), 1 Storekeeper (Power Operations); 1 Energy Risk Manager* (Finance); and 2 Power Scheduling Managers* (Resource Development). In addition, the 2015 Budget reflects a full year of the Spring 2014 salary survey and job classification revisions in the labor and benefits category. The four aforementioned positions noted with an " * " were authorized by the Agency Board at their July 17, 2014 meeting.

The following discusses the individual component budgeted line items for the **Operating Expenditures**:

Overall the **Power Operations** budget will increase $1.8 million primarily for the following: labor & benefits increasing $836,000, equipment repair and maintenance increasing $107,000 for needed repairs such as additional repairs to the Middle Fork Powerhouse main transformer, consulting increasing $422,000 to cover specialized testing services such as transformer and circuit breaker high voltage testing, and consulting engineering services such as the design and specification of fire detection and alarm systems for all five powerhouses and cost share partnership agreements increasing $316,000, which is almost exclusively an increase to the US Forest Service as the carryover funding is being depleted.

General and Administrative 2015 expense budget amount is similar to 2014.

Natural Resource Management is budgeted to decrease $1.2 million over the 2014 budget, which is primarily attributable to the Federal Energy Regulatory Commission (FERC) License Implementation budget decrease of $1.6 million, as the assumption is that the FERC License will not be received until January 1, 2016. The other primary components include additional regulatory and legislative funding of $200,000 and additional consulting, legal and helicopter services collectively totaling $165,000. FERC license condition implementation varies from year-to-year, depending on the work load associated with specific license condition implementation timeline assigned by FERC. Until the license is issued, PCWA has budgeted work based on an estimate of the required actions and the annual sequencing of monitoring and mitigation requirements. This line item will continue to fluctuate based on the required schedule of implementation. During the interim period, several license implementation functions that will be required once the license is issued continue to be developed. This includes implementing a database of all required actions at each project location and affected stream reaches, as well as planning for infrastructure projects that are required under the existing and future license, such as recreational facility design planning and implementation and ongoing coordination with the two national forests where project recreational facilities are located. As for legislative and regulatory, PCWA is engaged in several state and federal regulatory processes above and beyond the FERC process to defend the Agency's water rights used for power generation and MFP operations. Traditionally, these have been funded entirely by the Agency Wide Fund because of PG&E's unwillingness to fund the needed advocacy efforts. The budget reflected some transitioning of these efforts to the Power Division budget in 2014, with an increase in 2015 as legislative and regulatory defensive efforts ramped up. Thus, 50% of the budget is included in the Natural Resource Management line item for activities that potentially impact the Agency's ability to store and use water for power generation purposes. Efforts that are strictly related to utilization of the Agency's consumptive water rights are not included.

Power Resource Management is budgeted to increase $632,000. The primary reason for this increase is directly attributable to the new power scheduling function with 2 new

Power Scheduling Manager positions, $406,000, and additional forecasting tools to enhance market monitoring and future energy value analysis, $130,000.

Routine Capital is about the same as 2014. Routine capital budget is for the purchase or replacement of equipment and vehicles. The 2015 Budget is budgeted at $887,000.

Debt Service – In April 2015, the Authority debt interest rate converts to a fixed rate (conversion date) and the payment of principal and interest payment commence October 1, 2015. 2016 and beyond will have a full year of principal and interest payments, two payments in April and October.

Reserves and Capital Funding – Operating reserve is to be fully funded prior to funding the Emergency and Capital reserves. The Capital Reserve is budgeted based on the annual capital project funding requirements. In 2015 and prior years, the Capital Reserve funding has been used for that year's budgeted capital project appropriation, and to date there has not been any funding of Capital Reserves. Based on the Capital Plan needs, the Capital Budget for 2015 – 2017 increased as projects were reprioritized to ensure reliability and performance upgrades are included first, while scheduling FERC mandated upgrades in strategic years (See further discussion below). This reprioritization should pay dividends in reduced downtime, improved reliability, improved market performance and a safer project.

Comparison of the 2015 Adopted Authority Budget to the 2014 Adjusted Authority Budget

Although, partially discussed in the aforementioned section, there are three primary reasons for the increase from the 2014 Budget to the 2015 Adopted Authority Budget as follows:

1. Lower than anticipated energy prices coupled with 2 dry years (2013 and 2014) have not produced the anticipated net revenues for reserve funding.
2. Reprioritization of the reliability and performance capital projects to implement these budgeted capital projects sooner to improve reliability, reduce downtime and improve market performance.
3. Phasing-in the schedule coordinator and control center functions sooner than originally anticipated to be prepared for the next Power Purchase Agreement negotiations.

Lower Energy Prices and the Drought - Hydrology and energy prices are the primary drivers of the significant historical variations in the annual MFP revenues. Both years 2013 and 2014 have been very dry and energy prices have been at 5 year lows.

As is typical with any annual budgeting process, the objective is to develop a financial plan, a budget, for the next fiscal year and that plan is often finalized without knowing the outcome of the current fiscal year. The Authority is no different. The Authority's annual budget process commences in Spring and is typically finalized in the Fall before the end of the Authority's fiscal year-end on December 31.

The 2013 Budget projected reserve funding at $16.4 million, however actual reserve funding at the end of the year was $7 million. This $9 million shortfall will need to be funded in the subsequent years.

The 2014 Budget projected that all reserves would be at their full target funding during year 2017 and thus, funds were available for distributions in the amount of $465,000 to each party from 2017 activity. Although 2014 Power Sales are projected to meet budget, resulting in an anticipated reserve funding of $10 million, this basically is funding reserves that were originally anticipated to be funded in 2013. The bottomline is that the lower energy prices and dry years, coupled with the increase in the near-term capital plan based on the capital project reprioritization and the acceleration of the control center and schedule coordinator functions, has pushed out the planned reserve funding, hence funds available for distribution.

All components of the Authority's Budget Schedule, whether revenue or expense, will impact reserve funding and ultimately distributions as it is the Authority's policy to fund reserves prior to making distributions. To better understand the Authority's budget and budget process, the following background information is provided.

<u>Power Sales, Hydrology and Budgeting Practices</u> - MFP Power Sales are subject to a variety of factors with varying ranges of fluctuations. The two more significant fluctuations are power prices and hydrology, with the year-to-year hydrologic variation having the greatest potential impact. To promote consistent and stable budgeting practices, a slightly conservative Power Sales budget is determined by 10 years of hydrologic conditions projected into the future at 80% of the average. This is about 0.5 standard deviations below the average and, thus, the expectation would be for actual generation to be above this base line amount 65% of the time and below this amount 35% of the time. This budgeting method, which is based on the Authority's policy, helps ensure Power Sales are not over-budgeted.

As previously stated, if average Power Sales, rather than 80% of average, were realized in years 2016 – 2019, then full target reserve funding could be met in 2018 with distributions and additional bond principal being made in 2018 and beyond.

<u>Reserve Funding</u> **-** The Authority's General Financial Policies adopted in April 2013, includes a section on reserves which is rooted in the JPA requirement for the Authority to establish and maintain prudent reserves. The Policy specifies that three categories of reserves shall be established: Operating, Capital, and Emergency. Reserve funding shall be included with the annual budget process. The Policy states funding targets for each reserve category: the Operating reserve target amount is set at a minimum of one year of operating expenses, the

Capital reserve target is based on funding needs of the capital projects presented in the 5-year Capital Plan and the Emergency reserve will be based on a study to determine a total amount of emergency funds that would be required under a severe outage contingency and be evaluated with other funding sources. The priority of reserve funding is Operating first, Emergency second, then Capital. The Policy states, *It is the Board's intentions that reserves are fully funded over a three year period to their annual target amounts before net revenue are distributed. Each of the remaining reserve accounts will have identified annual and full funding targets.*

<u>2013 Financial Results, Power Sales and Reserve Funding</u> **-** In fact, even with the conservative budget practice, the budgeted 2013 Power Sales that covered the period May 1 - December 31, 2013 (two-thirds of the year as the 2013 PPA commenced May 1, 2013) was twice decreased because of energy prices and hydrology. The 2013 Authority's adopted Budget in November 2012 included the Power Sales amount totaling $38 million. At the mid-year review in July 2013 the budgeted Power Sales were decreased $5.3 million to $32.7 million based on revised energy price forecast and actual MFP hydrology. At year end, the actual Power Sales for the period May 1 – December 31, 2013 were $26.6 million (audited) or $11.4 million less than the original $38 million budget.

The adopted 2013 Budget was anticipated to fund reserves in an amount totaling $16.4 million ($20.4 m total available less $4.0 m of prior year carryover funds designated to working cash). The actual reserve funding for 2013 activity was $7.0 million, all of which was placed in the Operating Reserve. This amount is $9.4 million less than originally budgeted, which means the reserve funding that was projected and budgeted to occur with 2013 funds, must be deferred until subsequent years. At December 31, 2013, the Authority's audited fund balance totaled $21.1 million, comprised of operating reserve of $7 million, working cash of $5.7 million and available projects balance of $8.4 million.

<u>2014 Power Sales and Reserve Funding</u> **–** 2014 was another dry year. However, it is projected the Authority will realize the Power Sales budget totaling $43.9 million as energy prices were up slightly during the year and with the drought, the Agency had a 40,000 acre foot water transfer all of which was able to produce electricity. This should result in funding the Operating reserve as budgeted with about $10 million.

Reprioritization of the Reliability and Performance Upgrade Capital Projects - The capital improvement project budget is influenced by three significant factors: 1) the age of the existing capital infrastructure that makes up the Middle Fork Project (MFP), 2) the potential revenue benefits that derive from being available to generate energy at all times for the California energy market, and 3) the requirements of the new FERC license, which is anticipated to be issued in 2016.

When the 1963 PPA ended, the Agency assumed responsibility for a 50 year old project that had its original physical plant maintained adequately, but lacked proactive replacement and technological improvement of its infrastructure. Equipment was generally run to failure and then replaced with little consideration of lost revenue due to downtime. While many critical pieces were replaced during this 50 year time span, many more were not, and are now past their reliable service life. These past practices have been replaced with a new standard of maintenance that emphasizes proactive equipment replacement based on risk to the safe and reliable operation of the project in order to meet new NERC, WECC and FERC requirements.

Overall, the 2015 – 2019 Capital budget prioritizes reliability and performance upgrades, while scheduling FERC mandated upgrades in strategic years. Staff believes that by implementing these budgeted capital improvements sooner rather than later will pay dividends in reduced downtime, improved reliability, improved market performance and a safer project.

Annually, during the budgeting process and at year-end, capital projects are reviewed for realistic funding needs and are budgeted based on anticipated cash out flow for the year.

Control Center and Schedule Coordinator Functions - Under the terms of the 2013 PPA, the Agency has full responsibility for determining energy schedules for all MFP generating units. PG&E performs control center and schedule coordinator services for the duration of the contract, 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, assuming $50 million in energy sales, while the Middle Fork Project Finance Authority receives the balance of all energy sale payments.

During the due diligence and negotiation process for the 2013 PPA, the Agency and Placer County staff originally analyzed the potential costs and benefits of the Agency assuming the Control Center and Schedule Coordination function responsibilities. At that time, it was determined that contracting these functions to PG&E was advantageous because it would allow time to build these functions within the Agency over the 4 year and 8 month contract term. With this timing in mind, the past Authority budgets (2013 and 2014) have reflected the control center functions and the hiring of additional staff in 2016 and 2017 to be prepared to assume these functions at the end of the current contract term (December 31, 2017). Staff believes there are several important economic, regulatory and operational benefits of assuming both the MFP Schedule Coordinator and Control Center functions sooner than originally anticipated.

MIDDLE FORK PROJECT FINANCE AUTHORITY
Summary Budget Schedule
Years 2014 - 2019

	Adjusted Budget 2014	**Adopted 2015**
Revenues and Other Financing Sources	$ 47,415,600	**47,976,000**
Expenditures, Appropriations and Other Uses:		
Administration	3,633,100	**997,000**
PCWA Power Division - Operating	22,665,898	**23,477,000**
Appropriation to Capital Projects (Through Capital Reserve)	10,641,000	**14,081,000**
Debt Service	-	**3,131,000**
Total Expenditures and Appropriations	36,939,998	**41,686,000**
Reserve Funding:		
Operating Reserves	10,475,602	**6,290,000**
Emergency Reserves	-	-
Capital Reserves	-	-
Total Reserve Funding	10,475,602	**6,290,000**
Net Revenue	-	-
Distributions and Debt Payment Requirement:		
County	-	-
PCWA	-	-
Additional Principal Payment	-	-
Total Distributions and Debt Payment Requirement	-	-
Net	$ -	-
Total Reserve Balance	$ 17,475,037	**23,765,037**

Projected 2016	Projected 2017	Projected 2018	Projected 2019
50,720,000	51,920,000	52,920,000	54,020,000
145,000	149,000	153,000	157,000
26,886,000	27,438,000	27,884,000	28,099,000
13,317,000	14,843,000	12,150,000	10,676,000
6,261,000	6,261,000	6,261,000	6,261,000
46,609,000	48,691,000	46,448,000	45,193,000
4,111,000	222,963	-	-
-	-	2,000,000	-
-	3,006,037	4,472,000	8,827,000
4,111,000	3,229,000	6,472,000	8,827,000
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
27,876,037	31,105,037	37,577,037	46,404,037

MIDDLE FORK PROJECT FINANCE AUTHORITY
Budget Schedule
Years 2014 - 2019

	Adjusted Budget 2014	**Adopted 2015**
Revenues and Other Financing Sources:		
Power Sales *(Note 1)*	$ 43,900,000	**47,100,000**
Bond Proceeds Including Interest Expense (New Draws) *(Note 3)*	3,495,600	**856,000**
Interest Income	20,000	**20,000**
Total Revenues and Other Financing Sources	47,415,600	**47,976,000**
Expenditures and Other Uses:		
Administration:		
Office Supplies	5,100	**5,200**
Administration	35,000	**36,000**
Professional Services	97,400	**99,800**
Bond Interest (capitalized) *(Note 2)*	3,495,600	**856,000**
Total Administration Expenditures	3,633,100	**997,000**
PCWA Power Division - Operating:		
Power Operations	11,369,142	**13,185,000**
General and Administrative	4,865,522	**4,530,000**
Natural Resources Management	3,523,179	**2,336,000**
Power Resources Management	1,907,555	**2,539,000**
Routine Capital	1,000,500	**887,000**
Total PCWA Power Division - Operating	22,665,898	**23,477,000**
Debt Service *(Note 2)*	-	**3,131,000**
Total Operating Expenditures	26,298,998	**27,605,000**
Reserve Contributions: *(Note 4)*		
Operating Reserves	10,475,602	**6,290,000**
Emergency Reserves	-	-
Capital Reserves	10,641,000	**14,081,000**
Total Reserve Funding	21,116,602	**20,371,000**
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 $5.8 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 2015 - 2019 are based on information provided by Tibbs Consulting. The current energy sales contract with PG&E ends December 31, 2017.

Note 2: Total debt at December 31, 2014 and March 31, 2015 is projected to be approximately $83.7 million and $84.5 million, respectively. The additional $3.5 million in 2014 and $0.9 million in 2015 is **bond interest expense capitalization**. Beginning April 1, 2015, bond interest is no longer capitalized and debt service payments for principal and interest begin October 1, 2015. The actual interest rate varies quarterly until the conversion date, April 1, 2015, at which time the interest rate will become fixed.

Note 3: As provided for in the Bond documents, the Authority will continue to capitalize the interest up to the conversion date of April 1, 2015. There is no effect to the net for this amount.

Note 4: **Reserve Contributions** - These include actual contributions to the Operating Reserve as well as both annual capital projects in years 2015-2019 and budgeted Capital Reserve funding starting in year 2017.

Projected 2016	Projected 2017	Projected 2018	Projected 2019
50,700,000	51,900,000	52,900,000	54,000,000
-	-	-	-
20,000	20,000	20,000	20,000
50,720,000	51,920,000	52,920,000	54,020,000
5,300	5,400	5,500	5,600
37,400	38,700	40,000	41,100
102,300	104,900	107,500	110,300
-	-	-	-
145,000	149,000	153,000	157,000
14,231,000	15,414,000	16,031,000	16,672,000
4,744,000	4,934,000	5,131,000	5,336,000
4,847,000	3,903,000	3,408,000	2,645,000
2,621,000	2,726,000	2,835,000	2,948,000
443,000	461,000	479,000	498,000
26,886,000	27,438,000	27,884,000	28,099,000
6,261,000	6,261,000	6,261,000	6,261,000
33,292,000	33,848,000	34,298,000	34,517,000
4,111,000	222,963	-	-
-	-	2,000,000	-
13,317,000	17,849,037	16,622,000	19,503,000
17,428,000	18,072,000	18,622,000	19,503,000
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

MIDDLE FORK PROJECT FINANCE AUTHORITY
Reserve Schedule
Years 2014 - 2019

	Adjusted Budget 2014	**Adopted 2015**
Operating Reserve [First Priority (Note 1)]:		
Full Funding Target (1 Year Ops Budget)	$ 23,477,000	28,099,000
Reserve, Beginning of Year	$ 6,999,435	17,475,037
Contribution	10,475,602	6,290,000
Balance End of Year	$ 17,475,037	23,765,037
Amount Needed to Meet Target, if any	$ (6,001,963)	(4,333,963)
Emergency Reserve [Second Priority (Note 2)]:		
Target Level of Reserve (Insurance/Debt/Cash)	$ 2,000,000	2,000,000
Reserve, Beginning of Year	$ -	-
Contribution	-	-
Balance End of Year	$ -	-
Capital Reserve [Third Priority (Note 3-sinking fund implemented in 2014)]:		
Target Amounts:		
Capital Reserve, Beginning of Year	$ -	21,188,000
Target Contribution based on 5-year Capital Plan Funding Matrix	31,829,000	20,350,500
Capital Plan Approved Projects - Current Year	(10,641,000)	(14,081,000)
Target Ending Balance	$ 21,188,000	27,457,500
Budget Amounts:		
Beginning Balance	$ -	-
Contribution	10,641,000	14,081,000
Use/Appropriated to Projects	(10,641,000)	(14,081,000)
Balance End of Year	$ -	-
Amount Needed to Meet Target, if any	$ (21,188,000)	(27,457,500)
Total Reserve Balance	**$ 17,475,037**	**23,765,037**

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. Once funded, the objective is to contribute one quarter of years 2 - 5 in the annual budget.

Projected 2016	Projected 2017	Projected 2018	Projected 2019
28,099,000	28,099,000	28,099,000	28,099,000
23,765,037	27,876,037	28,099,000	28,099,000
4,111,000	222,963	-	-
27,876,037	28,099,000	28,099,000	28,099,000
(222,963)	-	-	-
2,000,000	2,000,000	2,000,000	2,000,000
-	-	-	2,000,000
-	-	2,000,000	-
-	-	2,000,000	2,000,000
27,457,500	30,531,000	26,907,000	24,176,000
16,390,500	11,219,000	9,419,000	9,000,000
(13,317,000)	(14,843,000)	(12,150,000)	(10,676,000)
30,531,000	26,907,000	24,176,000	22,500,000
-	-	3,006,037	7,478,037
13,317,000	17,849,037	16,622,000	19,503,000
(13,317,000)	(14,843,000)	(12,150,000)	(10,676,000)
-	3,006,037	7,478,037	16,305,037
(30,531,000)	(23,900,963)	(16,697,963)	(6,194,963)
27,876,037	**31,105,037**	**37,577,037**	**46,404,037**

PLACER COUNTY WATER AGENCY
MFP Infrastructure Projects
As Funded by the Middle Fork Project Finance Authority
2015-2019

Project No.	Project Description	Project Lead	Project Type	Total Estimated Project Cost *(Note 1)*
MINOR PROJECTS - TOTAL				
MAJOR PROJECTS - AUTHORIZED:				
	Energy Trade Risk Management System	FIN	Software	$ 1,500,000
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
14011P	Middle Fork Project Control Center Equipment	PWR	Equipment	2,400,000
14010P	Oxbow Powerhouse Reliability Upgrades	PWR	Plant	Ongoing
12015A	Project Wide Communications Upgrade	PWR	Communications	10,455,000
12029A	Project Wide SCADA Reliability Upgrades	PWR	SCADA	2,480,000
08007A	Project Wide Standard Operating Plan and Procedures	PWR	Planning	4,190,000
14012P	Ralston Powerhouse Reliability Upgrades	PWR	Plant	Ongoing
14013P	Relicensing - Project Infrastructure	PWR	Plant	25,075,000
14014P	Relicensing - Project Recreation Facilities	RD	Environmental	16,686,000
SUBTOTAL - MAJOR AUTHORIZED PROJECTS				
MAJOR PROJECTS - PLANNED:				
	Abay Sediment Removal and Boat Launch Improvements	PWR	Dam	4,300,000
SUBTOTAL - MAJOR PLANNED PROJECTS				
TOTAL MAJOR 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.

Adopted 2015	Projected 2016	Projected 2017	Projected 2018	Projected 2019	TOTAL 2015-2019
$ 1,282,000	**1,145,000**	**140,000**	**340,000**	**-**	**2,907,000**
1,500,000					1,500,000
569,000	1,899,000	290,000	750,000	550,000	4,058,000
30,000					30,000
1,044,000	484,000	440,000	5,090,000	5,000,000	12,058,000
250,000	750,000				1,000,000
619,000	734,000	90,000	40,000	50,000	1,533,000
3,000,000	4,000,000	2,000,000	30,000		9,030,000
300,000	300,000	300,000	300,000	300,000	1,500,000
100,000	100,000				200,000
1,415,000	150,000	190,000	90,000	1,500,000	3,345,000
2,740,000	2,785,000	10,907,000	3,228,000		19,660,000
1,232,000	670,000	486,000	2,282,000	3,276,000	7,946,000
12,799,000	**11,872,000**	**14,703,000**	**11,810,000**	**10,676,000**	**61,860,000**
	300,000				300,000
-	**300,000**	**-**	**-**	**-**	**300,000**
12,799,000	**12,172,000**	**14,703,000**	**11,810,000**	**10,676,000**	**62,160,000**
$ 14,081,000	**13,317,000**	**14,843,000**	**12,150,000**	**10,676,000**	**65,067,000**

Minor Projects - Total

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

1. Existing Project Adjustment Fund.
2. Hell Hole Powerhouse Reliability Upgrades.
3. Hillside Slope Stability - Middle Fork Project.
4. Middle Fork Penstock Interior Inspection and Recoating.
5. Project Wide CMMS.
6. Project Wide Risk Assessment and Management.
7. Project Wide Security Surveillance Improvements.
8. Project Wide VHF Radio Upgrade.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 1,282,000	1,145,000	140,000	340,000	-	2,907,000

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.

Energy Trade Risk Management System

Project Number: N/A
Project Category: Major-Authorized
Project Lead: Finance
Project Type: Software

The Agency is working towards obtaining its own scheduling coordinator (SC) ID from CAISO. Current control room and SC functions are performed by PG&E. The Agency desires to become a SC as soon as possible. As a SC, the Agency would be engaging in various complex types of wholesale energy transactions including transmission paths, control area source/sink information, and use of intermediaries and third parties to execute transactions. All transaction details must be maintained for settlement, accounting, liquidity, risk management and reporting purposes. Specialized software is needed to manage these new responsibilities. The Energy Trade Risk Management System software, often referred to as a Deal Capture System, is the appropriate system to address the Agency's needs.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 1,500,000	-	-	-	-	1,500,000

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.

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. Replacement of unit and station annunciator equipment.
2. Battery room installation.
3. Replacement of the generator excitation system.
4. Replacement of the generator protection equipment.
5. Replacement of the turbine governor.
6. Upgrade remote terminal unit (RTU) processor.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 569,000	1,899,000	290,000	750,000	550,000	4,058,000

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.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 30,000	-	-	-	-	30,000

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.

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. Replacement of unit and station annunciator equipment.
2. Battery room installation.
3. Upgrades to the generating unit cooling water and station sump pump controls.
4. Penstock maintenance.
5. Replacement of the generator excitation system for both units.
6. Replacement of the generator protection equipment for both units.
7. Upgrades to the switchyard.
8. Upgrade surge access road.
9. Upgrade the Station Remote Terminal Unit (RTU) processor.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 1,044,000	484,000	440,000	5,090,000	5,000,000	12,058,000

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.

Middle Fork Project Control Center Equipment

Project Number: 14011P
Project Category: Major-Authorized
Project Lead: Power
Project Type: Equipment

This project includes the necessary furnishings and technology improvements to be installed within the proposed primary and backup MFP Control Centers to provide operational control of the Middle Fork Project.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 250,000	750,000	-	-	-	1,000,000

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.

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. Replacement of unit and station annunciator equipment.
2. Battery room installation.
3. Upgrades to the generating unit cooling water and station sump pump controls.
4. Installation of fire detection and alarm in the powerhouse.
5. Replacement of the generator excitation system.
6. Replacement of the generator protection equipment.
7. Upgrade the Oxbow governor.

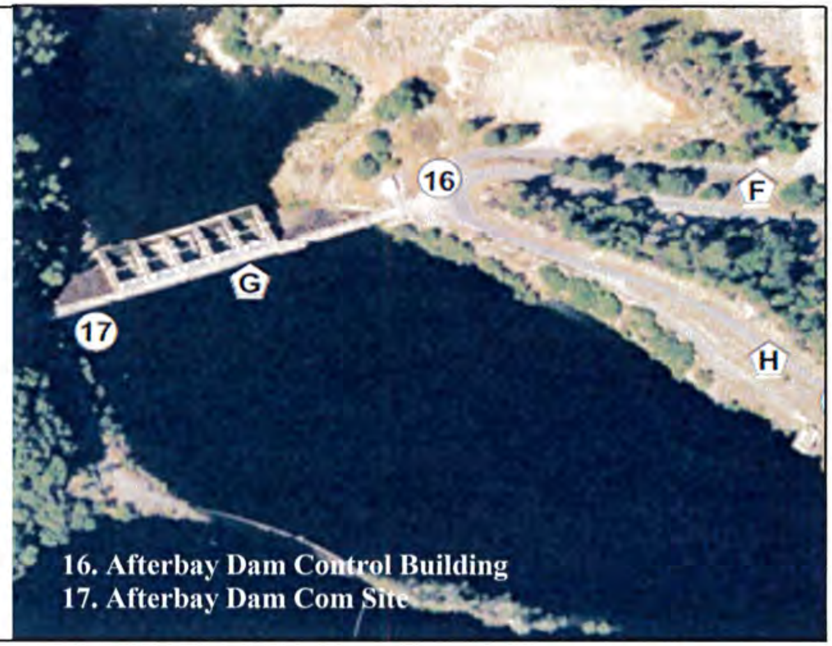
Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 619,000	734,000	90,000	40,000	50,000	1,533,000

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.

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 power systems communications system that connects the powerhouses together. The Agency's Foresthill Facilities Center, the Auburn Business Center, and the California Independent System Operator (CAISO) would then be inter-linked.



Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 3,000,000	4,000,000	2,000,000	30,000	-	9,030,000

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.

Project Wide SCADA Reliability Upgrades

Project Number: 12029A
Project Category: Major-Authorized
Project Lead: Power
Project Type: SCADA

This project will involve replacement or upgrade and installation of Supervisory Control And Data Acquisition (SCADA) network equipment such as: control system software, redundant servers, data historian storage servers, active directory servers, GPS based time services, and Domain Name Servers. It will also include upgraded workstations and a California Independent System Operator (CAISO) interface for Automatic Generation Control (AGC).


SCADA Servers and Network Equipment

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 300,000	300,000	300,000	300,000	300,000	1,500,000

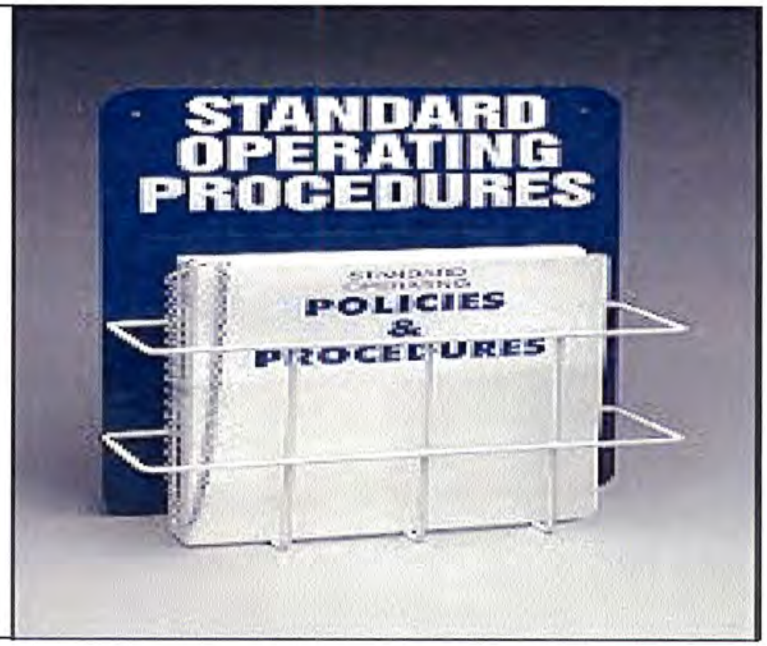
This project is a Major Project, or project category, with a total estimated project cost at more than $1 million, as defined by MFPFA policy as Potential, Planned or Authorized. Major Projects may be comprised of a variety of sub-projects that will be allocated, administered and accounted for as separate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

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	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 100,000	100,000	-	-	-	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.

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. Upgrades to the generating unit cooling water and station sump pump controls.
2. Replacement of the generator excitation system.
3. Penstock hillside stability and rockfall protection.
4. Replacement of the Ralston Tunnel intake trash rack cleaner.
5. Upgrade Station Remote Terminal Unit (RTU) processor.

Ralston Powerhouse

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 1,415,000	150,000	190,000	90,000	1,500,000	3,345,000

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.

Relicensing - Project Infrastructure

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

This project consists of capital infrastructure work required under the new FERC license. The work includes the following upgrades and improvements:

1. A group of dam outlet upgrades at various sites.
2. A group of diversion upgrades at various sites.
3. Construction of moveable gates at Hell Hole Reservoir.
4. Road stabilization improvements at Hell Hole Dam Spillway.
5. Improvements to the Hell Hole Dam crest.
6. Improvements to LL Anderson Dam Spillway.
7. Pipe Interior Coating Repair at LL Anderson Dam.
8. Road reconstruction between Middle Fork Penstock Access Road and the Middle Fork Tunnel Surge Shaft.
9. General project wide road improvements.

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 2,740,000	2,785,000	10,907,000	3,228,000	-	19,660,000

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.

Relicensing - Project Recreation Facilities

Project Number: 14014P
Project Category: Major-Authorized
Project Lead: Res Dev
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. Construct and improve recreation facilities in the vicinity of the Ralston Afterbay.
2. Extend boat ramp and improve the picnic area at French Meadows Reservoir.
3. Rehabilitate RV dump and improve the campground at French Meadows Reservoir.
4. Develop a potable water supply for campground at French Meadows Reservoir.
5. Upgrade the boat ramp and parking areas and provide a potable water supply at Hell Hole Reservoir.
6. Make improvements to campground at Hell Hole Reservoir
7. Develop public access to the Middle Fork American River around the Middle Fork Powerhouse.
8. Upgrade the well at the Middle Meadows campground.

French Meadows Campground

Funding Source	2015 Adopted	2016 Projected	2017 Projected	2018 Projected	2019 Projected	Total
Middle Fork Project Finance Authority	$ 1,232,000	670,000	486,000	2,282,000	3,276,000	7,946,000

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.

MIDDLE FORK PROJECT
FINANCE AUTHORITY

ESTABLISHED 2006

Hell Hole Reservoir Spillway