Annual Reserves Report, October 16, 2018

Yuba Water Agency Adequate Reserves, 2018-2023

The Board of Directors established a Reserves Policy and reserves amount of $200 million in December 2016 to ensure the Agency has adequate financial resources for risks facing the Agency and for future major capital projects that are either Agency obligations or Board directed. The Reserves Policy directs the establishment and maintenance of the reserves and the authority of use and transfer. This reserves report describes the specific levels of funding based on 2018 conditions. This update identifies the reserve needs and notes the capital project funding needs into the future.

The overall $200 million reserve target comprises $32.5 million for Operating Reserves; $8.0 million for Emergency Reserves; $5.5 million in Levee Bond Reserves; and $154.0 million in Non-Routine & Capital Projects Reserves. (Please see below for a description of each category.)

While $200 million may seem a high reserves figure for a public agency, the figure is actually very conservative given that if the Agency power generation assets were significantly damaged, the Agency would suffer the actual loss plus the lost power generation revenue. The Operating Reserves ($32.5 million) would cover actual operating expenses for one year, but would not include any rebuilding or repair costs. The $154 million in Non-Routine & Capital Projects Reserves, are designed to ensure funding to construct major priority projects, or projects that may occur because of unexpected loss, over the next five years. The $154 million actually pales in comparison to the total cost of capital projects identified as needed within the next five years, including $90.9 million in capital upgrades, $160 million for the NBB Secondary Spillway, and $44.4 million in projects that are expected to be required within the first nine years of the new FERC license, which could be issued in as soon as three years.

While typically YWA generates enough revenue on an annual basis to cover anticipated expenditures in an average year plus contribute some money to reserves, there can be great variability in revenues due to uncontrollable factors including drought and wet cycles that dictate the amount of hydroelectric generation and uncontrollable market price for electricity. These reserves would be tapped for a period of drought so that normal operations and planned projects could efficiently move forward. Analysis based on historic hydrology shows that while power revenues and water transfer revenues can vary from $40 million to $71 million in any year, the 10-year average of annual revenues is estimate to be $64 million, including power sales revenues and water transfer revenues. Annual expenditures are anticipated to average $55 million.

YWA could also suffer extreme revenue loss due to catastrophic damage to or failure of Agency generators, dams, tunnels from a major flood or other catastrophic event. While YWA is covered by insurance to assist in some extreme situations, such as business interruption insurance, most coverage will not compensate for the full impact of the situation or there will be a need for cash on hand to facilitate emergency response and repairs while the insurance and other sources such as FEMA are sorted out. The Agency is covered by Business Interruption insurance with a 60-day waiting period, and covers revenue lost for up to 18 months.

Overall target for Reserves: $200 million

Reserve Account	2018 Target	Funded as of Sept. 30, 2018
Operating Reserves	$ 32.5 million	$32.5 million
Emergency Reserves	$ 8.0 million	$ 8.0 million
Levee Bond Payment Reserves	$ 5.5 million	$ 5.5 million
Non-Routine & Capital Projects Reserves	$154.0 million	$ 67.0 million
TOTAL	**$200.0 million**	**$113.0 million**

Operating Reserves Target: $32.5 million

YWA targets to have $32.5 million in Operating Reserves to provide cash to operate the Agency under the conditions of significantly reduced revenue. As outlined in the Reserves Policy, $32.5 million is estimated to be one year of total Agency operating expenses, not including projected non-routine & capital projects or bond payments.

Emergency Reserves: $8.0 million

YWA targets to maintain $8.0 million in emergency reserves to recover and restore operational capability in the event of an unforeseen catastrophic event. The more typical significant failures of large hydroelectric generators include items such as generator winding failures and generator breaker failures. This category of failure can generally be addressed for $5 million or less.

In other YWA funded areas, levee weakening or repair could pose an immediate need and would quality for Emergency Reserve coverage. In addition, wildfire or other natural disaster could threaten water supply and require emergency funding. An additional $3 million is added to reserves to cover these events, bringing the total required for Emergency Reserves to $8 million.

Levee Bond Payment Reserves: $5.5 million

YWA has committed to pay off the debt of levee bonds sold in 2008, and refinanced in 2016, to finance the local share of the levee improvements. Those payments are $5.5 million annually.

Non-Routine & Capital Projects Reserves: $154.0 million

The $154.0 million amount for non-routine & capital projects is an estimate of funds needed to complete or continue essential capital projects over the five-year reserves horizon. Specifically included in this reserve fund is $90.9 million to cover the total cost of the Agency-developed five-year Capital Improvement Plan for power systems and general fund projects to upgrade facilities that are 50 years old and to build new needed facilities. This CIP includes major upgrades to current operations, such as Narrows 2 life extension and modernization ($33.5 million), Narrows 1 assessment and upgrade ($10.1 million), warehouse and office construction ($10.8 million), and south fish screen ($6 million).

YWA has also submitted its application to secure its Federal Energy Regulatory Commission (FERC) license to operate the YRDP. In its application for a new license, YWA has identified approximately $44.4 million in capital improvements to recreation, flood, and water infrastructure improvements during the first five years after the issuance of the new license. While it is impossible to predict when the new FERC license will be issued, the earliest estimate is three years and a more likely time frame is up to ten years.

The remaining $18.7 million of the total $154 million in this non-routine & capital projects reserves fund is included to cover costs anticipated for new capital projects that are expected to or could begin work within the next five years. For example, over the next three years, design and permitting work ($11 million) for the expected construction of a secondary spillway at New Bullards Bar Dam, as described below, will begin. Design and permitting could also begin on a new Colgate tailwater depression system (total cost approximately $16 million), also included in the FERC license application.

Into the Future: 5+ years out

As directed in the Reserves Policy, YWA strives to anticipate the financial needs of the Agency over the next five years and potential risks which could interrupt financial security. Beyond the five-year horizon, many more needed YWA capital projects and community capital projects such as flood district improvement projects have been identified. The total cost of identified non-routine & capital projects is more than $500 million in future years.

In addition to the five-year CIP for upgrade of current facilities, YWA has committed $11 million to design and permitting over the next three years with the expectation of constructing the secondary spillway at New Bullards Bar Dam within the next 5 years. The secondary spillway that will reduce flood risk by being lower on the dam, making it possible for YWA to release more water from the New Bullards Bar Reservoir before large, threatening storms, when there is enough downstream channel capacity to handle the flows. While the estimated total cost of the secondary spillway is $160 million, there is uncertainty of the YWA funds needed for the project because YWA will be seeking grant funding for the project.

In addition to the $160 million for the secondary spillway, total costs of the new FERC license conditions in our application and supported by the FERC DEIR will be more than $153 million (based on a 30-year license term) with $44.4 million for construction projects required in the first nine years after receiving the new license.

Future financial needs which are farther out on the financial horizon also include approximately $295 million in identified flood risk reduction projects from the strategic plan.

Clearly, the total needs of internal YWA projects and YWA strategic plan funded projects in our community far exceed funding levels identified in the Reserves Policy. The five-year planning horizon is used in an effort to find balance between “hoarding” cash and prudent savings. Fully funded reserves at even the more modest 5-year level of $200 million will also strengthen the Agency’s credit worthiness if borrowing to complete a longer-term major project were required and will aid in the decision-making process of future proposed projects. Reserve needs will be assessed on a yearly basis to determine if a high or lower level amount is needed.