

Date: January 11, 2017

To: NID Board President Nick Wilcox and NID Directors
From: Otis Wollan, President, American River Watershed Institute



RE: Centennial Dam projected cost estimate reaches \$1 billion

President Wilcox and Board Members,

First let me welcome Mr. Wilcox as Board President and Directors Miller and Morebeck on their successful re-election; your service is appreciated. In late June, 2016 the District received a letter from the Foothills Water Network (FWN) requesting that the District develop and share a financial analysis of the Centennial Project. Mr. Scherzinger replied to that request stating in part, "...it is the District's intent to release any completed supporting analysis and reports prior to the assembly of the final financial plan." The District has made substantial progress toward that intention by releasing the cost and feasibility studies on the dam's construction options and the Dog Bar Bridge replacement options.

However, many project cost details have not yet been released. I volunteered to research, assemble, and share project cost estimates with FWN and others concerned with the project's viability. My preliminary work includes industry standard line items, line item estimates based on conversations with colleagues over my long career in water issues, and debt service projections and costs. It appears the total life cycle cost of the project may reach or exceed a billion dollars. This is disconcerting because the various cost estimates provided publicly by the District to date are still in the \$300 million range, though President Wilcox recently stated a projected cost of \$500 million.

I will be making a detailed report of my findings available to you soon. This is a difficult task in large part because the purpose of and need for the dam has not been specifically and consistently articulated in a way that comports with information currently available from the District in its various published plans and reports. Attached is my draft opinion of projected costs.

I and others, including NID tax and ratepayers, continue looking forward to understanding the fully inclusive and transparent financial analysis of the project and consideration of alternative investments that, as Mr. Scherzinger stated in his reply, "...make strong financial sense for our community."

cc: Rem Scherzinger, P.E., MBA, NID General Manager

Opinion of Potential Costs of Centennial Reservoir Project

<i>Project element</i>	<i>cost</i>	<i>notes</i>
Dam construction costs		from NID OPPC study: http://nidwater.com/wp-content/uploads/2016/07/071916_ENG_Item2.pdf
Dam Construction RCC, Axis 2	\$259,203,000	
Coffer dam/diversion works	\$500,000	Orange highlighted items are noted in NID's study as "excluded from this OPCC, but should be considered by NID", or "design elements that need to be considered and further developed by NID". Estimates derived from numerous sources (see full Opinion Paper "Notes on Spreadsheet" section).
spillway	1,000,000	
reservoir clearing	750,000	
NID project admin & mgt	1,500,000	
land acquisition	23,000,000	
Hydroelectric Elements		
FERC license	1,500,000	Environmental studies extended to Camp Far West
hydro diversion works	2,000,000	Hydroelectric generation was omitted in NID's latest OPPC study, but has consistently been cited as a revenue source; estimates provided.
hydroelectric facility	50,000,000	
transmission lines	1,000,000	
Dog Bar Bridge Replacement		
new Dog Bar Bridge	54,000,000	preferred option, from NID study
bridge right of way acquisition	2,000,000	estimate, noted missing in NID study
Permits and Reports		
Geotech report	2,000,000	includes need for further studies (from OPPC)
CEQA EIR	2,500,000	HDR consulting contract for CEQA EIR
NEPA EIS	2,500,000	ESA consulting costs through ACE for NEPA EIS
SWRCB water right permit	500,000	application in and paid
SWRCB power permit	500,000	application in, but not paid
Army Corps permitting	500,000	404, 401
Legal	2,500,000	EIR/EIS legal challenges; SWRCB protests/hearing
Mitigations		
Environmental mitigation	50,000,000	2200 acres @\$10k/acre with ratio 2:1 & 7 river miles
UAIC cultural mitigation	30,000,000	based on UAIC staff estimate, studies & site losses
Recreation mitigation	2,000,000	replace Placer County Campground + Dog Bar
Growth impact mitigation	2,000,000	project is growth inducing
Traffic impact mitigation	1,000,000	Bridge re-alignment commuter traffic mitigation
Misc: Public relations, media	1,000,000	\$300,000 spent in 2016
2016 subtotal	\$492,453,000	
2017 Subtotal	\$509,688,855	California Water Commission inflation cost escalator of 3.5%/yr 2016 to 2022, compounded annually.
2018 Subtotal	\$527,527,965	
2017 Subtotal	\$545,991,444	
2020 Subtotal	\$565,101,144	
2021 Subtotal	\$584,879,684	
Total Cost 2022	\$605,350,473	
Scenario 1 financing at 4.5%	\$ 498,849,418	AAA muni bonds 30-yr term interest at 4.5%
Scenario 1 TOTAL COST	\$ 1,104,199,891	Annual costs \$36,806,664
Scenario 2 financing at 5.5%	\$ 632,010,353	AAA muni bonds 30-yr term interest at 5.5%
Scenario 2 TOTAL COST	\$ 1,237,360,826	Annual costs \$41,245,356