

Staff Report

TO: Board of Directors
FROM: Keane Sommers, P.E., Director of Power Systems
DATE: October 25, 2023
SUBJECT: Hydroelectric Department Financial Overview

HYDROELECTRIC

RECOMMENDATION:

Receive an informational presentation on the finances of the Hydroelectric Department.

BACKGROUND:

Staff will present an overview of the financial history of the Hydroelectric Department. The presentation will provide a brief description of the powerhouses, review revenue prior to the end of the Partnership Agreement with PG&E, discuss recent finances, and outline the subsidy the Hydroelectric Department provides to water rate payers.

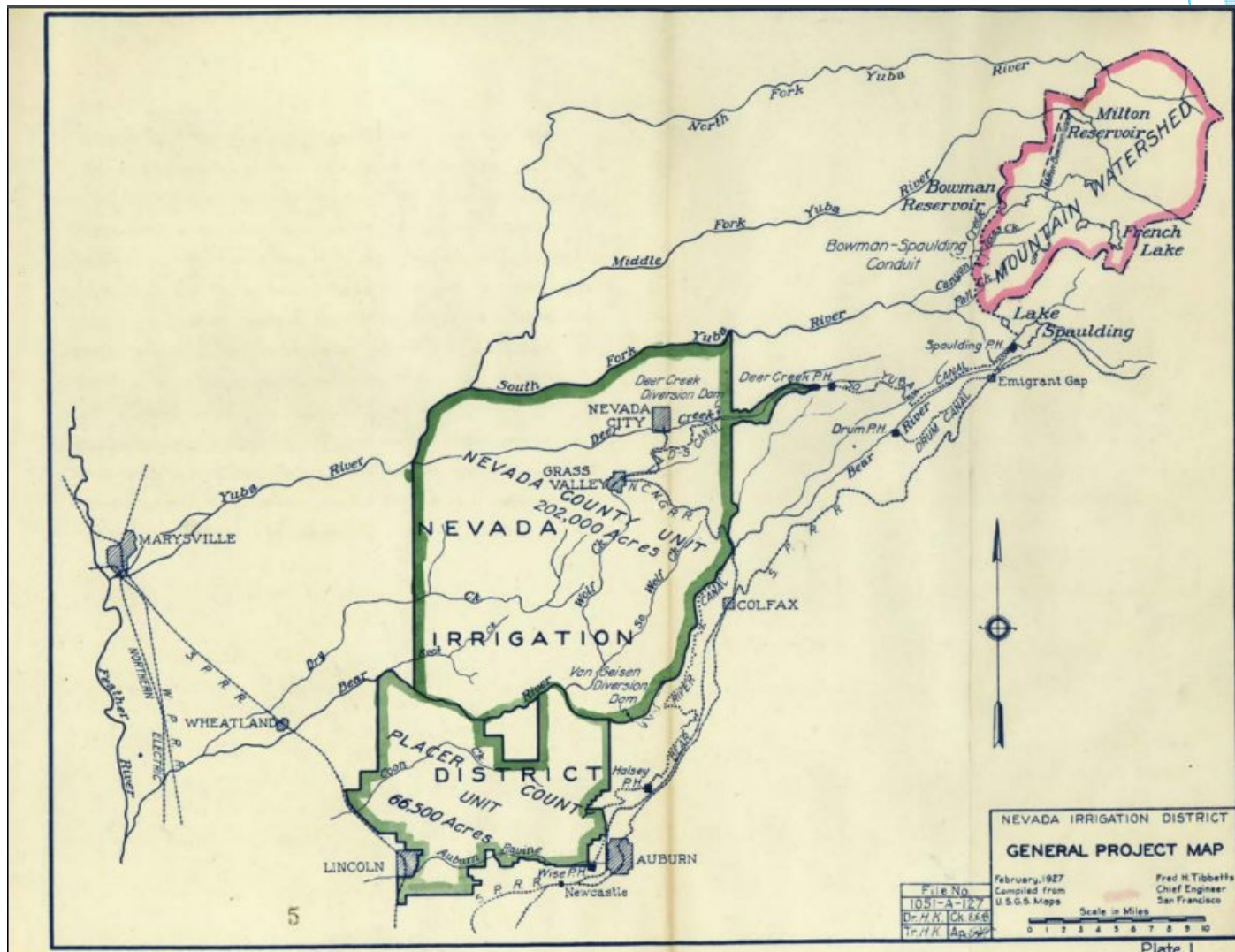
BUDGETARY IMPACT:

There is no budgetary impact associated with this item.

Attachments (1)
Presentation

Hydroelectric Department Financial Overview Workshop

October 25, 2023



NID

Water for Life

Introduction

- ▶ Goal for today
 - ▶ Outline financial history of department
 - ▶ Provide an overview of historic revenue and costs
 - ▶ Quantify Hydro subsidy to Water
- ▶ Future discussions
 - ▶ Relicensing costs
 - ▶ South Yuba Canal
 - ▶ Future revenue growth opportunities



Powerhouse Overview

Facility	Nameplate Capacity (MW)	2018-2022 Year Historic Average Output (MWh)	Year Constructed	Power Purchase Agreement Notes
Chicago Park	39	104,203	1965	PG&E, availability based, expires June 30, 2033
Dutch Flat #2	24.57	47,417	1965	PG&E, availability based, expires June 30, 2033
Rollins	12.15	54,732	1980	PG&E, availability based, expires June 30, 2033
Deer Creek	5.5	18,548	1908	NCPA (City of Lodi), market based, expires December 31, 2025
Bowman	3.6	10,262	1986	PG&E, availability based, expires June 30, 2033
Combie South	1.5	4,458	1984	NCPA (City of Lodi), market based, expires December 31, 2025
Scotts Flat	0.85	4,701	1984	RES-BCT tariff. Used to offset District usage.
Combie North	0.522	1,526	2010	PG&E, fixed pricing based on output, expires October 5, 2024.

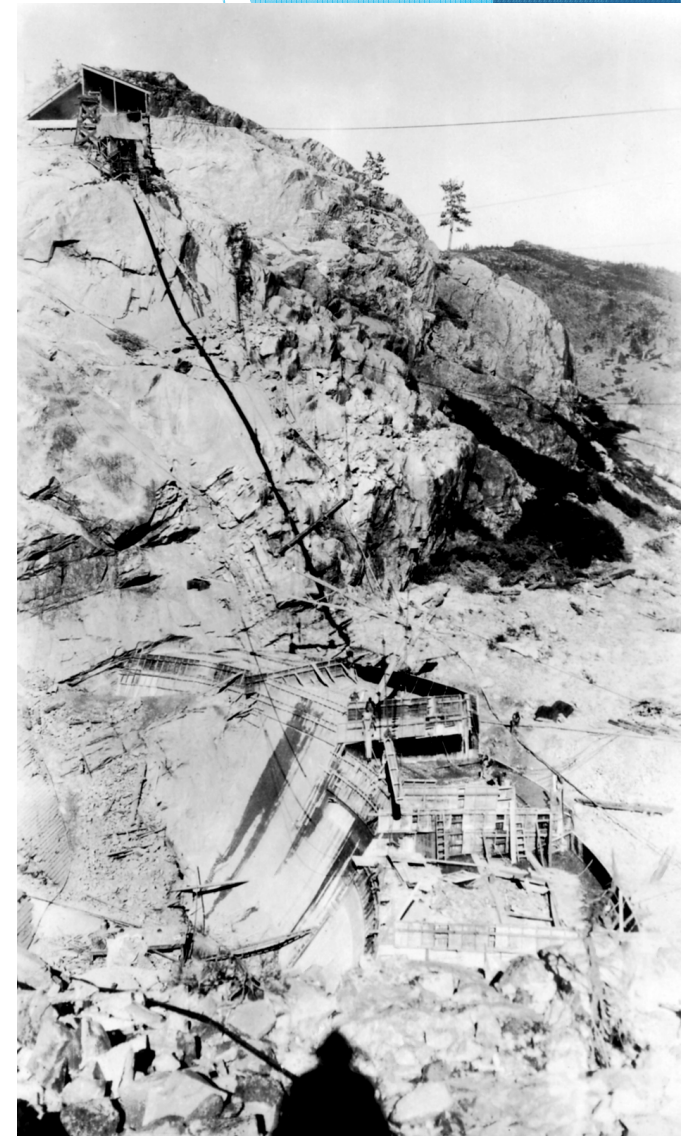
Historic Revenue (Yuba-Bear)

- ▶ Electricity produced by Yuba-Bear (including) Rollins sold to PG&E for:
 - ▶ Debt service on bonds
 - ▶ Costs associated with maintenance and operation of the projects
 - ▶ Ended July 1, 2013
- ▶ Rollins
 - ▶ Four mills per kilowatt hour minimum (1 mill per kilowatt hour (kWh) equals 1 dollar per megawatt hour (MWh))
 - ▶ Fluctuated with rates for qualifying facilities appointed by the CPUC
 - ▶ Cash transferred to water fund
 - ▶ Ended July 1, 2013
- ▶ Bowman
 - ▶ Since 1987 Standard Offer Power Purchase Agreement
 - ▶ Cash transferred to water fund
 - ▶ Ended December 31, 2016

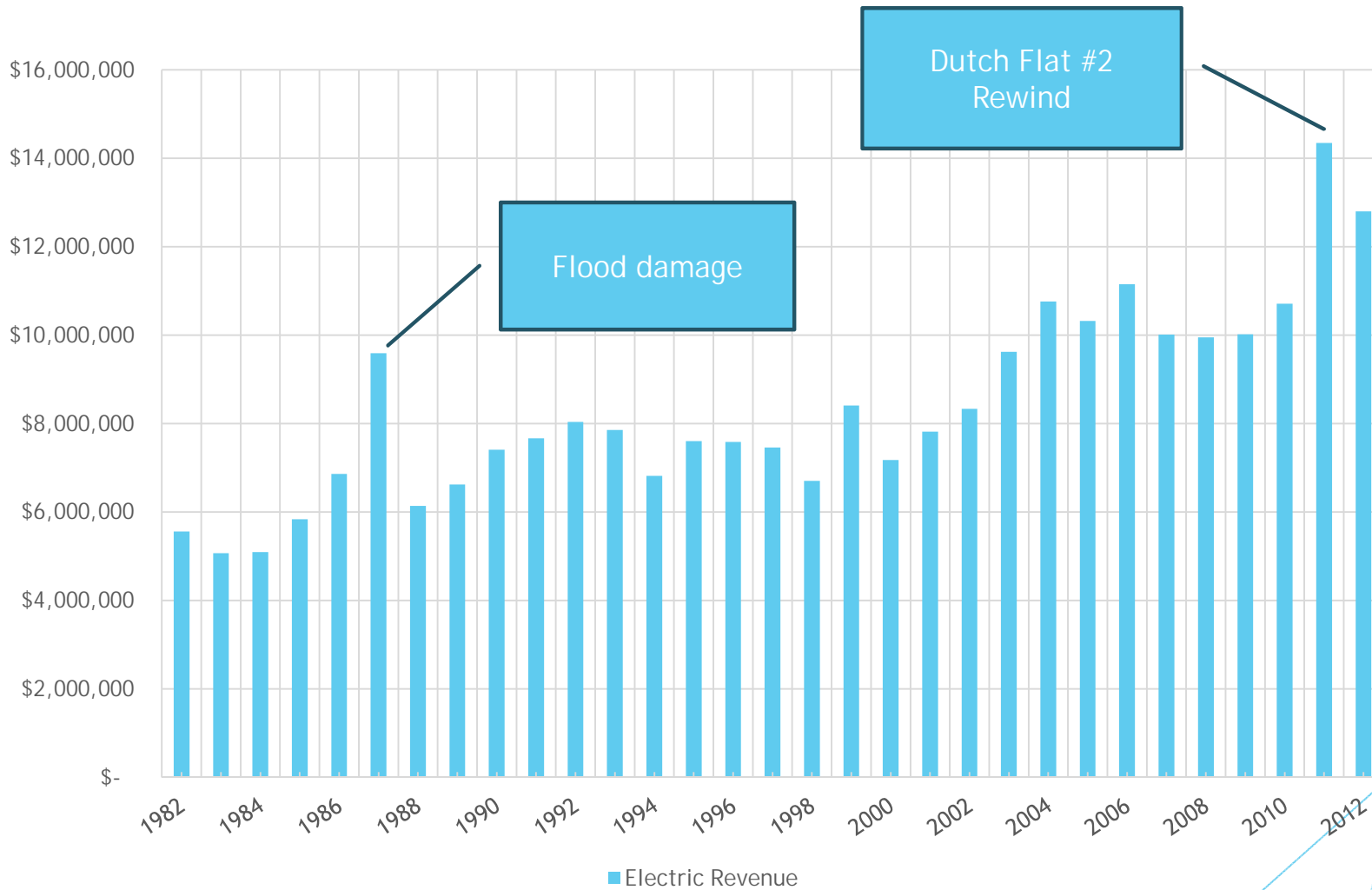


1983 Electric Revenue Example

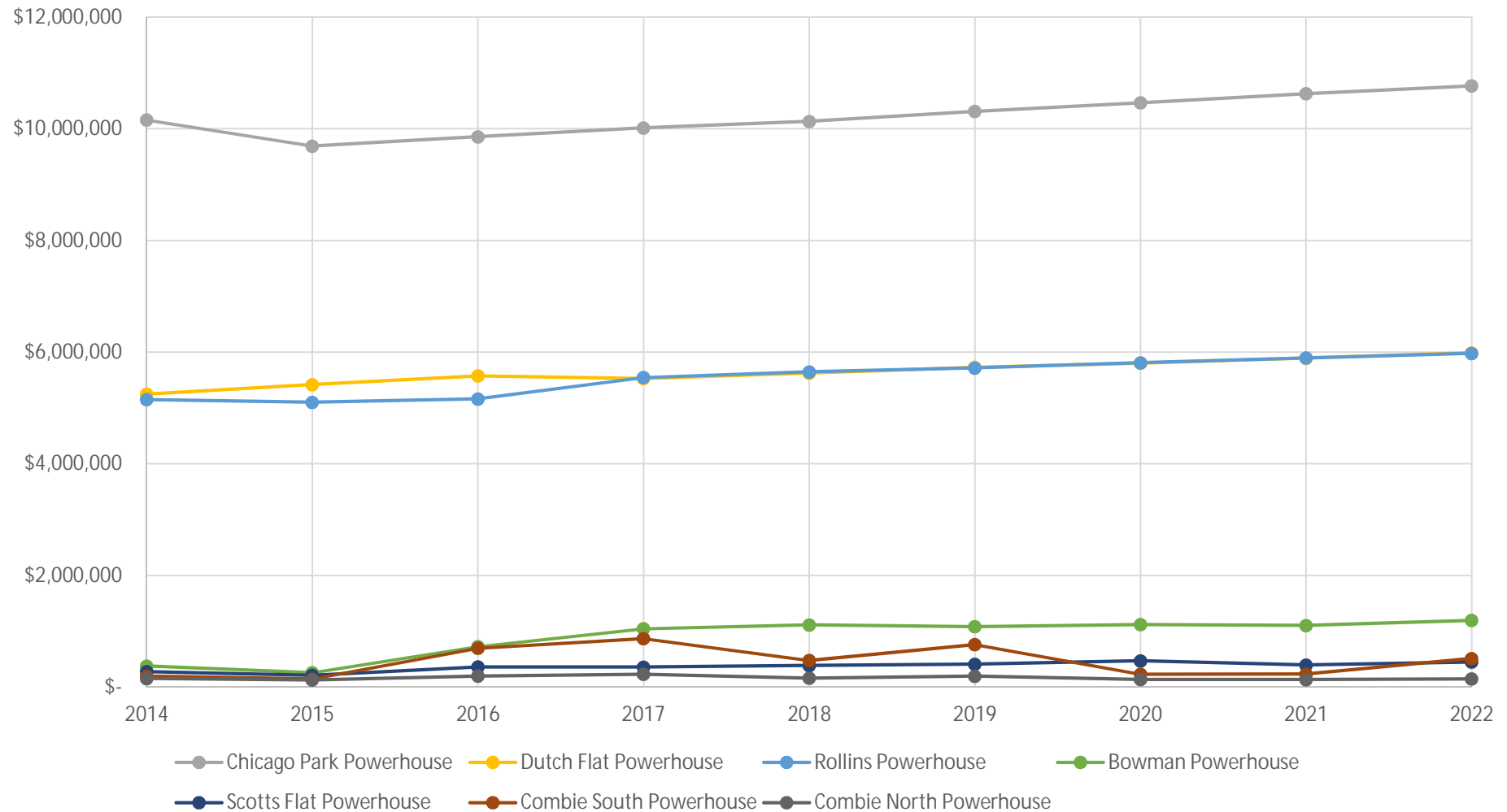
Category	Revenue
Debt Service	\$3,499,054
Operations and Maintenance	\$1,162,046
Yuba Bear Subtotal	\$4,661,100
Rollins	\$407,240
Total Electric Revenue	\$5,068,340



Electric Revenue (1982-2012)



Electric Revenue by Powerhouse (2014-2022)

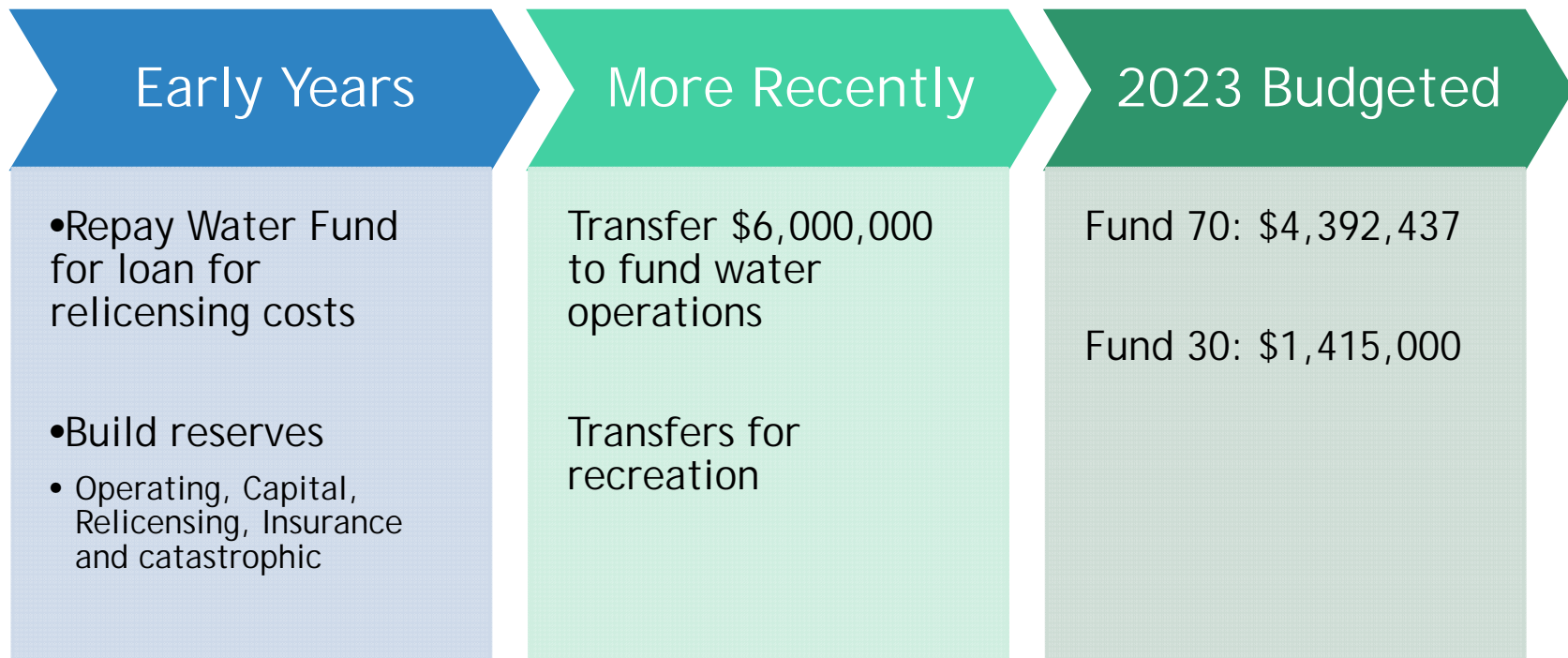


Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Revenue	\$21,545,982	\$20,938,643	\$22,559,519	\$23,578,561	\$23,526,675	\$24,193,843	\$24,022,283	\$24,268,428	\$25,023,701

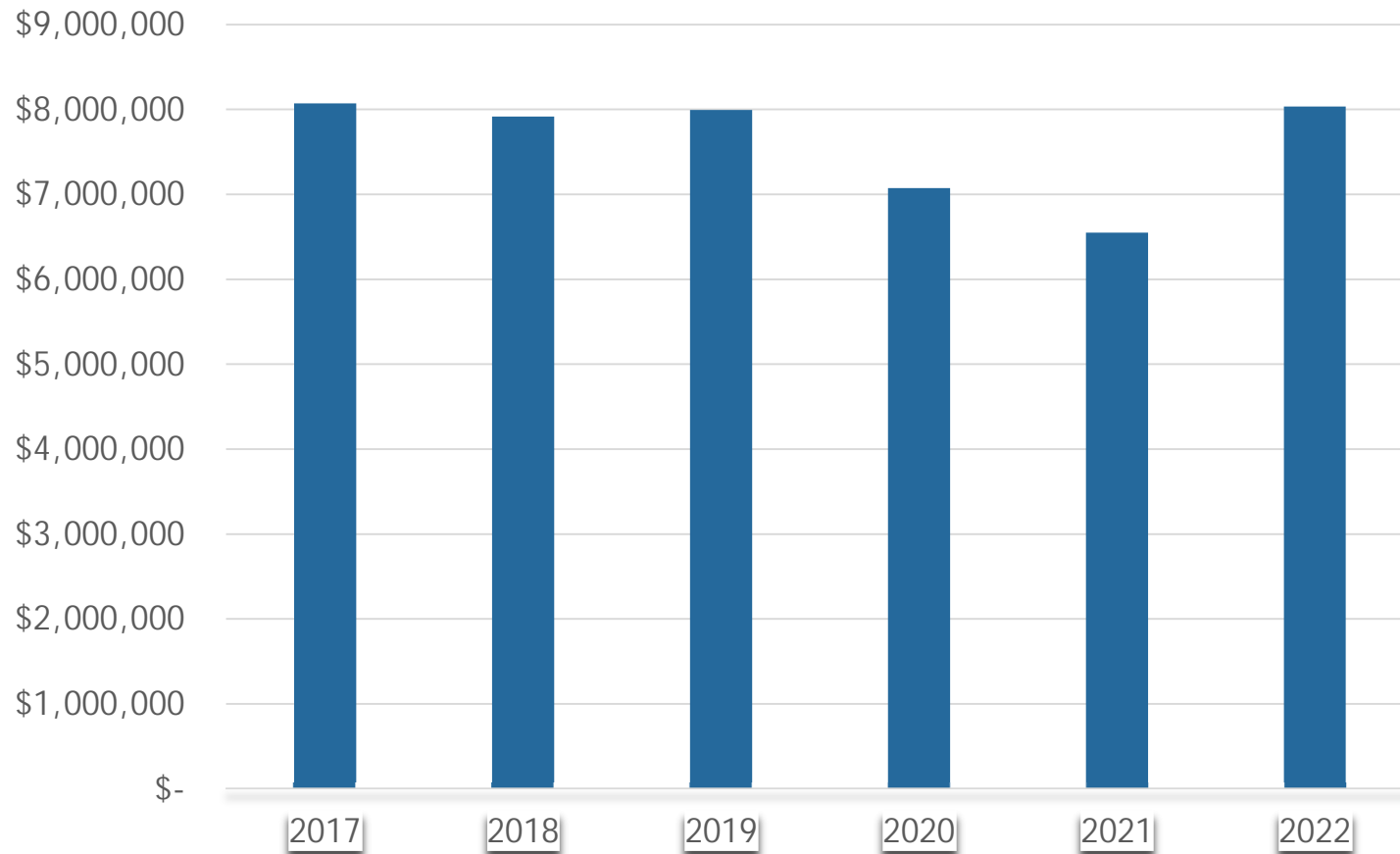
2022 Revenue

Revenue Source	Total
<u>Various Power Purchase Agreements</u>	
Yuba-Bear	
Chicago Park	\$10,768,136
Dutch Flat #2	\$5,983,868
Rollins	\$5,976,365
Bowman	\$1,191,805
Combie North	\$145,437
Combie South	\$509,783
Deer Creek	N/A
<u>Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT)</u>	
Scotts Flat	\$448,306
<u>Hydro Support Services</u>	
South Sutter Water District	\$312,822
<u>Bowman Transmission Line (57.14% Cost Reimbursement)</u>	
Grey Rock Hydro (Haypress Powerhouses)	\$68,031
<u>Total</u>	\$25,404,553

Recent Hydro Revenue Uses Under Current PPAs (Beyond O&M and Capital)



Operations and Maintenance Expenses 2017-2022

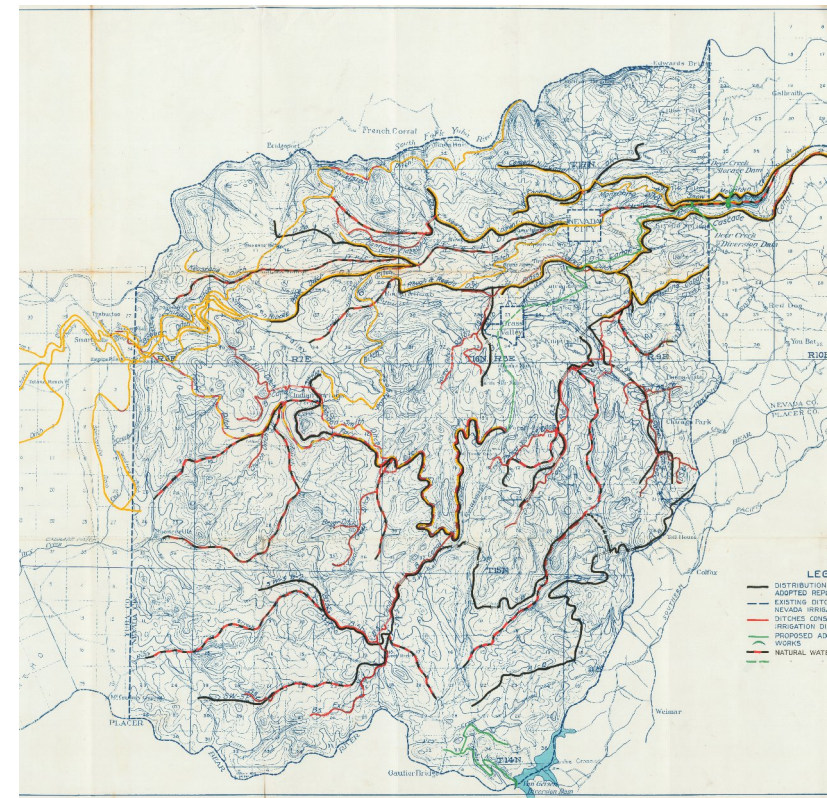


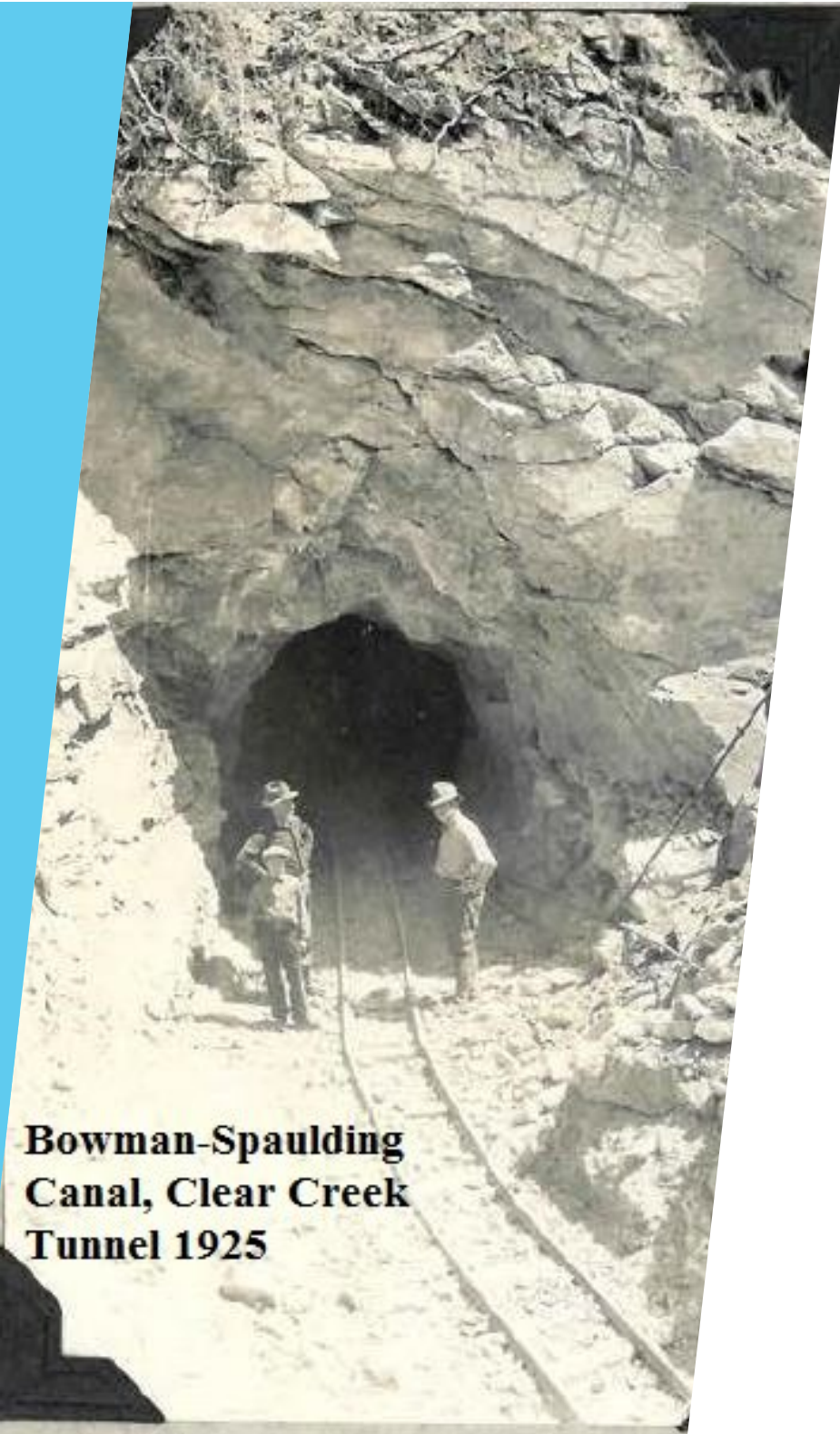
Notes:

1. Does not include capital expenditures
2. Does not include payments to Fund 30 or 70

Current Water Subsidy

- ▶ Question:
 - ▶ If NID had never built the powerhouses, how much would ratepayers have to fund to operate and maintain the system of dams and conveyances necessary to deliver water to, and store water in, the lower division?
- ▶ Methodology:
 - ▶ Line by line review of the 2023 budget.
 - ▶ Water (cost would exist even if the powerhouses did not, e.g. DSOD fees, expenses on Bowman-Spaulding Canal)
 - ▶ Power (expense is related entirely to power function of Department, e.g. FERC, NERC)





**Bowman-Spaulding
Canal, Clear Creek
Tunnel 1925**

Results

- ▶ Reduction of 19 out of 34 budgeted positions
 - ▶ Management & compliance
 - ▶ Plant operators
 - ▶ Electrical specialties
- ▶ Eliminates payment to Fund 70 with little reduction to overall Fund 70 costs (2023 Budget \$4,392,437)
 - ▶ Little or no change to Board, Administration, Human Resources, Finance, Safety, Communications, Purchasing
 - ▶ Likely some reduction in Information Technology, Engineering, Fleet
- ▶ If NID had never built the powerhouses, water ratepayers would have had to budget \$12,436,143 in 2023 to operate and maintain the system of dams and conveyances necessary to deliver water to, and store water in, the lower division.

Questions and Discussion



Rollins Powerhouse Equipment being delivered, 1979