

BP-18 Rate Proceeding

Final Proposal

Power Revenue Requirement Study
Documentation

BP-18-FS-BPA-02A

July 2017



POWER REVENUE REQUIREMENT STUDY DOCUMENTATION

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COMMONLY USED ACRONYMS AND SHORT FORMS

AAC	Anticipated Accumulation of Cash
ACNR	Accumulated Calibrated Net Revenue
ACS	Ancillary and Control Area Services
AF	Advance Funding
AFUDC	Allowance for Funds Used During Construction
aMW	average megawatt(s)
ANR	Accumulated Net Revenues
ASC	Average System Cost
BAA	Balancing Authority Area
BiOp	Biological Opinion
BPA	Bonneville Power Administration
Bps	basis points
Btu	British thermal unit
CIP	Capital Improvement Plan
CIR	Capital Investment Review
CDQ	Contract Demand Quantity
CGS	Columbia Generating Station
CHWM	Contract High Water Mark
CNR	Calibrated Net Revenue
COB	California-Oregon border
COE	U.S. Army Corps of Engineers
COI	California-Oregon Intertie
Commission	Federal Energy Regulatory Commission
Corps	U.S. Army Corps of Engineers
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council	Northwest Power and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CSP	Customer System Peak
CT	combustion turbine
CY	calendar year (January through December)
DD	Dividend Distribution
DDC	Dividend Distribution Clause
<i>dec</i>	decrease, decrement, or decremental
DERBS	Dispatchable Energy Resource Balancing Service
DFS	Diurnal Flattening Service
DNR	Designated Network Resource
DOE	Department of Energy
DOI	Department of Interior
DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EE	Energy Efficiency
EIM	Energy imbalance market

EIS	Environmental Impact Statement
EN	Energy Northwest, Inc.
ESA	Endangered Species Act
ESS	Energy Shaping Service
e-Tag	electronic interchange transaction information
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FELCC	firm energy load carrying capability
FOIA	Freedom Of Information Act
FORS	Forced Outage Reserve Service
FPS	Firm Power and Surplus Products and Services
FPT	Formula Power Transmission
FY	fiscal year (October through September)
G&A	general and administrative (costs)
GARD	Generation and Reserves Dispatch (computer model)
GMS	Grandfathered Generation Management Service
GSP	Generation System Peak
GSR	Generation Supplied Reactive
GRSPs	General Rate Schedule Provisions
GTA	General Transfer Agreement
GWh	gigawatthour
HLH	Heavy Load Hour(s)
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydrosystem Simulator (computer model)
IE	Eastern Intertie
IM	Montana Intertie
<i>inc</i>	increase, increment, or incremental
IOU	investor-owned utility
IP	Industrial Firm Power
IPR	Integrated Program Review
IR	Integration of Resources
IRD	Irrigation Rate Discount
IRM	Irrigation Rate Mitigation
IRPL	Incremental Rate Pressure Limiter
IS	Southern Intertie
kcf/s	thousand cubic feet per second
kW	kilowatt
kWh	kilowatthour
LDD	Low Density Discount
LGIA	Large Generator Interconnection Agreement
LLH	Light Load Hour(s)
LPP	Large Project Program
LPTAC	Large Project Targeted Adjustment Charge
LTF	Long-term Form
Maf	million acre-feet

Mid-C	Mid-Columbia
MMBtu	million British thermal units
MNR	Modified Net Revenue
MRNR	Minimum Required Net Revenue
MW	megawatt
MWh	megawatthour
NCP	Non-Coincidental Peak
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NFB	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp)
NLSL	New Large Single Load
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries
NOB	Nevada-Oregon border
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NP-15	North of Path 15
NPCC	Pacific Northwest Electric Power and Conservation Planning Council
NPV	net present value
NR	New Resource Firm Power
NRFS	NR Resource Flattening Service
NT	Network Integration
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operation and maintenance
OATI	Open Access Technology International, Inc.
OS	Oversupply
OY	operating year (August through July)
PDCI	Pacific DC Intertie
Peak	Peak Reliability (assessment/charge)
PF	Priority Firm Power
PFp	Priority Firm Public
PFx	Priority Firm Exchange
PNCA	Pacific Northwest Coordination Agreement
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration or Point of Interconnection
POR	Point of Receipt
Project Act	Bonneville Project Act
PS	Power Services
PSC	power sales contract

PSW	Pacific Southwest
PTP	Point to Point
PUD	public or people's utility district
PW	WECC and Peak Service
RAM	Rate Analysis Model (computer model)
RCD	Regional Cooperation Debt
RD	Regional Dialogue
REC	Renewable Energy Certificate
Reclamation	U.S. Bureau of Reclamation
RDC	Reserves Distribution Clause
REP	Residential Exchange Program
REPSIA	REP Settlement Implementation Agreement
RevSim	Revenue Simulation Model
RFA	Revenue Forecast Application (database)
RHWM	Rate Period High Water Mark
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RR	Resource Replacement
RRS	Resource Remarketing Service
RSC	Resource Shaping Charge
RSS	Resource Support Services
RT1SC	RHWM Tier 1 System Capability
SCD	Scheduling, System Control, and Dispatch rate
SCS	Secondary Crediting Service
SDD	Short Distance Discount
SILS	Southeast Idaho Load Service
Slice	Slice of the System (product)
T1SFCO	Tier 1 System Firm Critical Output
TCMS	Transmission Curtailment Management Service
TGT	Townsend-Garrison Transmission
TOCA	Tier 1 Cost Allocator
TPP	Treasury Payment Probability
TRAM	Transmission Risk Analysis Model
Transmission System Act	Federal Columbia River Transmission System Act
Treaty	Columbia River Treaty
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	Transmission Services
TSS	Transmission Scheduling Service
UAI	Unauthorized Increase
UFT	Use of Facilities Transmission
UIC	Unauthorized Increase Charge
ULS	Unanticipated Load Service
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish & Wildlife Service

VERBS	Variable Energy Resources Balancing Service
VOR	Value of Reserves
VR1-2014	First Vintage Rate of the BP-14 rate period (PF Tier 2 rate)
VR1-2016	First Vintage Rate of the BP-16 rate period (PF Tier 2 rate)
WECC	Western Electricity Coordinating Council
WSPP	Western Systems Power Pool

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1. GENERATION REVENUE REQUIREMENTS

1.1 Introduction

This chapter documents how Bonneville Power Administration's (BPA) annual generation revenue requirements are determined. Two tables are presented for each year of the rate period (FY 2018-2019). On the first table, revenue requirements for FY 2018-2019 are projected in an income statement format. The second table, a statement of annual cash flows, determines the minimum required net revenues and presents the annual cash flows available for risk mitigation. These revenue requirements form the basis of the program.

1.2 Income Statement

Below is a line-by-line description of the components in the Table 1A, Income Statement

Power System Generation Resources (Line 2). This category encompasses the costs associated with power generated by Federal hydroelectric facilities operated by the Corps and Reclamation and power obtained through contracts for non-Federal resources and through energy conservation. This category includes lines 3 through 10, described below. *See* Documentation, BP-18-FS-BPA-02A, Chapter 3.

Operating Generation Resources (Line 3). This category includes the operations and maintenance expenses associated with power-producing resources including the CGS, Reclamation, and Corps, and the annual expenses associated with long-term contract generating projects. *Id.*

Operating Generation Settlement Payments (Line 4). A settlement agreement between the Confederated Tribes of the Colville Reservation and the United States was signed in 2004 concerning the construction of Grand Coulee Dam. The Settlement Act (Public Law 103-436) ratifying the settlement agreement authorizes BPA to make annual payments to the Tribes for the use of tribal lands for power production at the Columbia Basin project. *Id.*

Non-Operating Generation (Line 5). This category includes the decommissioning costs of the Trojan nuclear plant and the unfinished WNP-1 and WNP-3 nuclear plants. *Id.*

Contracted Power Purchases (Line 6). This category includes short-term (balancing) power purchases and hedging/mitigation. *Id.*

Augmentation Power Purchases (Line 7). This category includes augmentation power purchases and the PNCA headwater benefit. Augmentation power purchase costs reflect the energy that BPA purchases in order to satisfy its obligation to meet the load requirements for public utilities. The PNCA headwater benefit refers to the costs associated with benefits BPA receives from storage projects in Canada. *Id.*

Exchanges and Settlements (Line 8). This category represents the benefits for qualifying public utilities and IOUs that are calculated as part of the Residential Exchange Program. *Id.*

Renewable Generation (Line 9). This category reflects the operating expenses of several generating projects fueled by renewable energy resources, such as wind, geothermal, methane gas, solar, and “fish-friendly small hydro projects.” *Id.*

Generation Conservation (Line 10). This category includes the cost of conservation programs including Marketing Development, which are reimbursable contracts with equal and offsetting revenues; Market Transformation; Legacy Conservation programs; Technology Leadership; and Low-Income Weatherization. *Id.*

Power Non-Generation Operations (Line 11). This category reflects Power Services’ internal costs associated with supporting the power function. It includes the costs of activities such as generation oversight, weather and stream flow forecasting, system operations planning, schedule planning, pre-scheduling, after-the-fact accounting of power transactions, power billing, customer account executives and customer service support staff, development and administration of power sales contracts, PS strategy development, PS financial reporting, analysis and budgeting, risk management, and PS human resources management. *Id.*

PS Transmission Acquisition and Ancillary Services (Line 12). This category includes the annual expenses associated with Power Services’ Transmission Acquisition program. It represents costs associated with services necessary to deliver energy from resources to markets or loads. This includes transmission, ancillary services, and real power losses, as purchased from BPA's Transmission Services business unit (TS) or non-Federal entities; TS embedded costs for the facilities that integrate power from Corps and Reclamation projects onto the transmission system; and metering and communication requirements. *Id.*

F&W/USF&W/Planning Council/Environmental Requirements (Line 13). BPA funds projects designed to protect, mitigate and enhance fish and wildlife affected by the FCRPS in a manner consistent with the NPCC Columbia River Basin Fish and Wildlife Program, and to implement commitments made pursuant to Biological Opinions (BiOps) issued by NOAA Fisheries and the U.S. Fish and Wildlife Service regarding species listed under the Endangered Species Act. This line item includes the expense portion of BPA’s Fish and Wildlife direct program, including staff costs and operating expenses of fish and wildlife activities. These activities include measures to implement the fish and wildlife mitigation consistent with the NPCC Fish and Wildlife Program as well BiOps issued by the NOAA Fisheries for listed salmon and steelhead and the U.S. Fish and Wildlife Service for listed bull trout and sturgeon. *Id.*

General and Administrative/Shared Services (Line 14). This category represents the allocated portion of BPA’s Corporate General and Administrative costs, which are allocated to the business lines. Major functions besides the Executive Office are Corporate Communication, Finance, Diversity, and Safety. This category includes costs for the Civil Service Retirement System (CSRS) expense; information technology services; infrastructure and maintenance; building rent, maintenance and security; mail services; personnel services; library and printing services; internal training; purchasing; and furniture. CSRS reflects the costs for the unfunded liability of the Civil Service Retirement and Disability Fund, the Employees Health Benefit Fund, and the Employees Life Insurance Fund. *Id.*

Other Income, Expenses, and Adjustments (Line 15). This category would include costs for items that do not fit in any other category. For this proposal, it includes an undistributed expense reduction identified in the IPR, an undistributed adjustment for potential non-Federal debt extension, the application of cash raised in prior rate periods for the repayment of Federal debt, and the use of cash freed up by refinancing certain non-Federal debt to offset the expensing of energy efficiency investments.. *Id.*, Chapter 3, Tables 3A and 3H

Non-Federal Debt Service (Line 16). This category consists of third-party debt service or payment costs associated with capitalized contracts and other long-term, fixed contractual obligations. Debt service costs associated with EN projects (WNP-1, CGS, and WNP-3) make up the majority of these costs. *Id.*, Chapter 8

Depreciation (Line 17). Depreciation is the annual capital recovery expense associated with FCRPS plant-in-service. Reclamation and Corps (including Lower Snake River Fish and Wildlife Compensation Plan (LSRCP)) plant, including assets for fish and wildlife recovery, is depreciated by the straight-line method of calculation, using the composite service life of all projects, 75 years. Capital equipment (office furniture and fixtures, data processing hardware and software, and communications equipment) is also depreciated by the straight-line method using the average service lives for the particular categories of capital investment. *Id.*, Chapter 4.

Amortization (Line 18). Amortization is the annual capital recovery expense associated with non-revenue-producing assets. Conservation acquisition investments beginning in FY 2011 are amortized using a straight-line, twelve-year life. Beginning in 2016, BPA will expense rather than capitalize such investments *Id.*

Total Operating Expenses (Line 19). Total Operating Expenses is the sum of the above expenses (Lines 2 through 18).

Interest on Appropriated Funds (Line 23). Interest on Appropriated Funds includes interest on Corps and Reclamation appropriations, as calculated in the generation repayment studies. *Id.*, Chapters 4 and 6. *Id.*, Chapter 3.

Capitalization Adjustment (Line 24). Implementation of the Refinancing Act entailed a change in capitalization on BPA's financial statements. Outstanding appropriations were reduced as a result of the refinancing by \$2,142 million in the generation function. The reduction is recognized annually over the remaining repayment period of the refinanced appropriations. The annual recognition of this adjustment is based on the increase in annual interest expense resulting from implementation of the Refinancing Act, as shown in repayment studies for the year of the refinancing transaction (1997). The capitalization adjustment is included on the income statement as a non-cash contra-expense. *Id.*

Interest on Bonds Issued to U.S. Treasury (Line 25). Interest on long-term debt includes interest on bonds that BPA issues to the U.S. Treasury to fund investments in capital equipment, conservation, and fish and wildlife, and to fund Reclamation and Corps investments under the Energy Policy Act of 1992 (EPA-92) (P.L. No. 102-486, 1992 U.S. Code Cong. & Admin.

News, 106 Stat. 2776). The interest expense is calculated in the generation repayment studies. Any payments of call premiums for bonds projected to be amortized are included in this line. *Id.*

Amortization of Capitalized Bond Premiums (Line 26). When a bond issued to the U.S. Treasury is refinanced, any call premium resulting from early retirement of the original bond is capitalized and included in the principal of the new bond. The capitalized call premium is then amortized over the term of the new bond. The annual amortization is a non-cash component of interest expense. No capitalized bond premiums are anticipated in the rate period.

Non-Federal Interest (Line 27). This line recognizes the interest component of the annual credits associated with the prepay program. *Id.*

Allowance for Funds Used During Construction (AFUDC) (Line 28). AFUDC is a credit against interest costs on long-term debt (Line 20). This reduction to gross interest reflects an estimate of interest on the funds used during the construction period of facilities that have yet to be placed in service. AFUDC is capitalized along with other construction costs and is recovered through rates over the expected service life of the related plant as part of the depreciation expense after the facilities are placed in service. AFUDC, which is calculated outside the generation repayment studies, is associated with the Corps and Reclamation capital investments direct-funded by BPA, and BPA capital equipment. *Id.*

Interest Credit on Cash Reserve (Line 29). An interest income credit is also computed on the projected year-end cash balance in the BPA fund attributable to Power Services that carries over into the next year. Also included is an interest income credit calculated in the generation repayment studies on funds to be collected during each year for payments of Federal interest and amortization at the end of the fiscal year. Interest income is credited against bond interest. *Id.*, Chapter 5.

Net Interest Expense (Line 30). Net Interest Expense is computed as the sum of Interest on Appropriated Funds (Line 22), Capitalization Adjustment (Line 23), Interest on Bonds Issued to U.S. Treasury (Line 24), Amortization of Capitalized Bond Premiums (Line 25), AFUDC (Line 26), and Interest Credit (Line 27).

Total Expenses (Line 31). Total Expenses are the sum of Total Operating Expenses (Line 19) and Net Interest Expense (Line 30).

Minimum Required Net Revenues (Line 34). MRNR, an input from Line 2 of the Statement of Cash Flows (Table 1B), may be necessary to cover cash requirements in excess of accrued expenses.

Planned Net Revenues for Risk (PNRR) (Line 37). PNRR are the amount of net revenues to be included in rates for financial risk mitigation. PNRR, starting reserves, the cash-flow when non-cash expenses exceed cash payments, the CRAC, and other risk mitigation tools are available to mitigate risk in FY 2018-2019, as discussed in the Power Risk and Market Price Study, BP-18-FS-BPA-03.

Planned Net Revenues, Total (Line 36). Planned Net Revenues is the sum of Minimum Required Net Revenues (Line 34) and PNRR (Line 37).

Total Revenue Requirement (Line 38). Total Revenue Requirement is the sum of Total Expenses (Line 32) and Total Planned Net Revenues (Line 36).

1.3 Statement of Cash Flows

Below is a line-by-line description of each of the components in the Table 1B, Statement of Cash Flows.

Minimum Required Net Revenues (Line 2). Determination of this line is a result of annual cash inflows and outflows shown on the Statement of Cash Flows. MRNR may be necessary so that the cash provided from operating activities will be sufficient to cover the planned amortization and irrigation assistance payments without causing the Annual Increase (Decrease) in Cash (Line 21) to be negative. The MRNR amount determined in the Statement of Cash Flows is incorporated in the Income Statement (Line 31).

Non-Federal Interest (Line 4). The interest component of the prepay credits is a non-cash item.

Depreciation and Amortization (Line 5). Depreciation and Amortization are from the Income Statement (Table 1A), lines 17 and 18 respectively. They are included in computing Cash Provided By Operating Activities (Line 10) because they are non-cash expenses of the FCRPS.

Non-Cash Expenses (Line 6). Energy Northwest is using lines of credit (LOC) to pay for its O&M costs and interest expense. This enables BPA to use the cash freed up by the LOC for early repayment of Federal obligations.

Amortization of Capitalized Bond Premiums (Line 7). Amortization of capitalized bond premiums is from the Income Statement (Table 1A, line 26). It is included in computing Cash Provided By Operating Activities (Line 10) because it is a non-cash expense of the FCRPS.

Capitalization Adjustment (Line 8). Capitalization Adjustment is from the Income Statement (Table 1A, Line 24). It is a non-cash contra-expense.

Non-Cash Revenues (Line 9). Revenues are associated with settlement agreements reached in prior periods as well as the credits associated with the prepay program. The annual non-cash revenues, which are part of the total revenues recovering the FCRPS revenue requirement, are included here as an adjustment to cash from current operations.

Cash Provided By Operating Activities (Line 10). Cash Provided By Current Operations, the sum of Lines 2, 4, 5, 6, 7, 8, and 9, is available for the year to satisfy cash requirements.

Investment in Federal Utility Plant (Including AFUDC) (Line 14). Investment in Utility Plant represents the annual increase in additions to appropriated plant-in-service and to capital expenditures for COE, Reclamation, and BPA construction work-in-progress funded by bonds.

Investment in Conservation (Line 15). Investment in Conservation represents the annual increase in capital expenditures associated with Conservation programs.

Investment in Fish and Wildlife (Line 16). Investment in Fish and Wildlife represents the annual increase in BPA's capital expenditures to fund projects for the protection, mitigation, and enhancement of fish and wildlife affected by the FCRPS in a manner consistent with the NPCC's Columbia River Basin Fish and Wildlife Program and the BiOp issued by NMFS and USFWS.

Cash Used for Investment Activities (Line 17). Cash Used for Investment Activities is the sum of Lines 14, 15, and 16.

Increase in Treasury Borrowings (Line 20). This category reflects the new bonds issued by BPA to the U.S. Treasury to fund capital equipment, conservation, and fish and wildlife capital programs and to direct-fund Reclamation and COE investments under the EPA-92. *Id.*, Chapter 7.

Repayment of Treasury Borrowings (Line 21). This is BPA's planned repayment of outstanding bonds issued by BPA to the U.S. Treasury as determined in the generation repayment studies. *Id.*, Chapter 6.

Increase in Federal Construction Appropriations (Line 22). Increase in Congressional Capital Appropriations represents congressional appropriations projected to be received during the year for COE and Reclamation capital projects. *Id.*, Chapter 4.

Repayment of Federal Construction Appropriations (Line 23). Repayment of Capital Appropriations represents projected amortization of outstanding COE and Reclamation appropriations as determined in the generation repayment studies. *Id.*, Chapter 6.

Repayment of Non-Federal Obligations (Line 24). This represents the repayment of the EN LOC issued in the prior year.

Customer Proceeds (Line 25). The prepay funds are a source of cash for capital investment. This line recognizes the drawdown of prepay funds as they are used to finance capital investments. *See* Chapter 3.

Payment of Irrigation Assistance (Line 26). Payment of Irrigation Assistance represents the payment of appropriated capital construction costs of Reclamation irrigation facilities that have been determined to be beyond the ability of the irrigators to pay and allocated to generation revenues for repayment. *Id.*, Chapter 9.

Cash Provided by Borrowing and Appropriations (Line 27). Cash Provided by Borrowing and Appropriations is the sum of Lines 20 through 25. This is the net cash-flow resulting from increases in cash from new long-term debt and capital appropriations and decreases in cash from repayment of long-term debt and capital appropriations.

Annual Increase (Decrease) in Cash (Line 29). Annual Increase (Decrease) in Cash is the sum of Lines 10, 17, and 27 and reflects the annual net cash-flow from current operations and investing and financing activities. Revenue requirements are set to meet all projected annual cash-flow requirements, as included on the Statement of Cash Flows. A decrease shown in this line would indicate that annual revenues would be insufficient to cover the year's cash requirements. In such cases, Minimum Required Net Revenues are included to offset such decrease.

Planned Net Revenues for Risk (PNRR) (Line 31). PNRR reflects the amounts included in revenue requirements to meet BPA's risk mitigation objectives from Table 1A, Line 37.

Total Annual Increase (Decrease) in Cash (Line 33). Total Annual Increase (Decrease) in Cash is the sum of Lines 29 and 31. It is the total annual cash that is projected to be available to add to BPA's cash reserves.

Table 1A

**GENERATION REVENUE REQUIREMENT
INCOME STATEMENT
(\$000s)**

	A	B
	<u>2018</u>	<u>2019</u>
1 OPERATING EXPENSES		
2 POWER SYSTEM GENERATION RESOURCES		
3 OPERATING GENERATION RESOURCES	703,407	759,721
4 OPERATING GENERATION SETTLEMENT PAYMENTS	22,612	22,997
5 NON-OPERATING GENERATION	1,500	1,534
6 CONTRACTED POWER PURCHASES	100,634	99,621
7 AUGMENTATION POWER PURCHASES	0	12,222
8 EXCHANGES & SETTLEMENTS	317,902	317,916
9 RENEWABLE GENERATION	38,332	39,060
10 GENERATION CONSERVATION	126,267	126,187
11 POWER NON-GENERATION OPERATIONS	90,411	94,319
12 PS TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	215,044	211,640
13 F&W/USF&W/PLANNING COUNCIL	321,821	322,101
14 GENERAL AND ADMINISTRATIVE/SHARED SERVICES	79,353	81,417
15 OTHER INCOME, EXPENSES AND ADJUSTMENTS	(128,728)	(74,168)
16 NON-FEDERAL DEBT SERVICE	490,562	420,704
17 DEPRECIATION	144,092	144,065
18 AMORTIZATION	<u>86,796</u>	<u>87,458</u>
19 TOTAL OPERATING EXPENSES	2,610,006	2,666,794
20		
21 INTEREST EXPENSE:		
22 INTEREST		
23 APPROPRIATED FUNDS	83,294	82,687
24 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
25 BONDS ISSUED TO U.S. TREASURY	56,449	63,302
26 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	0	0
27 NON-FEDERAL INTEREST	11,628	10,747
28 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(8,379)	(8,307)
29 INTEREST CREDIT ON CASH RESERVES	(1,392)	(2,205)
30 NET INTEREST EXPENSE	95,662	100,287
31		
32 TOTAL EXPENSES	2,705,668	2,767,081
33		
34 MINIMUM REQUIRED NET REVENUE 1/	220,252	67,984
35 PLANNED NET REVENUE FOR RISK	20,000	20,000
36 PLANNED NET REVENUE, TOTAL (30+31)	240,252	87,984
37		
38 TOTAL REVENUE REQUIREMENT	2,945,919	2,855,065

1/ SEE NOTE ON TABLE 1B

Table 1B

**GENERATION REVENUE REQUIREMENT
STATEMENT OF CASH FLOWS
(\$000s)**

	<u>A</u>	<u>B</u>
	2018	2019
1 CASH FROM OPERATING ACTIVITIES		
2 MINIMUM REQUIRED NET REVENUE 1/	220,252	67,984
3 NON-CASH ITEMS:		
4 NON-FEDERAL INTEREST	11,628	10,747
5 DEPRECIATION AND AMORTIZATION	230,888	231,524
6 NON-CASH EXPENSES	0	0
7 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	0	0
8 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
9 NON-CASH REVENUES	(34,124)	(34,124)
10 CASH PROVIDED BY OPERATING ACTIVITIES	382,706	230,194
11		
12 CASH FROM INVESTMENT ACTIVITIES		
13 INVESTMENT IN:		
14 UTILITY PLANT (INCLUDING AFUDC)	(401,786)	(339,696)
15 ENERGY EFFICIENCY	0	0
16 FISH & WILDLIFE	(51,000)	(44,000)
17 CASH USED FOR INVESTMENT ACTIVITIES	(452,786)	(383,696)
18		
19 CASH FROM BORROWING AND APPROPRIATIONS:		
20 INCREASE IN BONDS ISSUED TO U.S. TREASURY	305,600	319,950
21 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(44,150)	(156,250)
22 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	147,186	63,746
23 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(91,070)	(17,371)
24 REPAYMENT OF NON-FEDERAL OBLIGATIONS	(220,252)	0
25 CUSTOMER PROCEEDS	0	0
26 PAYMENT OF IRRIGATION ASSISTANCE	(27,234)	(56,573)
27 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	70,080	153,502
28		
29 ANNUAL INCREASE (DECREASE) IN CASH	0	0
30		
31 PLANNED NET REVENUE FOR RISK	20,000	20,000
32		
33 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	20,000	20,000

1/ Line 26 must be greater than or equal to zero to indicate that cash cost recovery requirements are being achieved. If not, net revenues (MRNR) are added so that net cash flows for the year (Line 21) are zero.

2. COST ANALYSES

2.1 Introduction

This chapter documents the development of the costs necessary for ratemaking from the annual generation revenue requirements. For Cost of Service Analysis (COSA), net interest expense and planned net revenues are assigned to each Federal Columbia River Power System (FCRPS) resource pool according to the necessary level of detail. The interbusiness unit embedded costs, generation inputs to ancillary services, synchronous condensing and Corps and Reclamation transmission, are developed from the COSA data.

Data development for the COSA and interbusiness unit embedded costs are derived from the annual costs identified in Table 1A - Generation Income Statement. For the COSA, net interest expenses and planned net revenues, which are first split between Federal hydro projects and the remainder of generation by the use of equivalent annual costs (defined below). The generation portions are then divided between Fish & Wildlife, Conservation and BPA generation programs based on average net investment. These allocations, in turn, form the basis for the association of net interest expenses and MRNR with the interbusiness unit embedded costs.

2.2 Annual Capital-Related Cost Components of COSA Resource Pools

Equivalent Annual Costs: Equivalent annual costs are used to prorate net interest expense and planned net revenues between Federal Hydro and the remainder of generation. They compensate for the differences in Federal Hydro of a 75-year service life, but a 50-year repayment period, whereas the other capital areas have the same service lives and repayment periods.

Consequently, net investment, the typical allocator, is distorted for Hydro. Equivalent annual costs are calculated as levelized principal and interest payments (mortgage basis) using gross plant investment and projected additions. A weighted average interest rate is used for the historical plant and projected interest rates are used for additions. The prorating is based on the sum of all calculated proxy-payments for Corps and Reclamation (Federal Hydro), and BPA plant, BPA fish and wildlife investment and all BPA conservation investments (all other generation). The non-Hydro portion is then allocated based on average net plant investment.

2.3 Interbusiness Unit Embedded Costs

All tables related to the development of interbusiness unit costs have been deleted because generation inputs rates were settled and did not depend on these embedded costs as would be typical if the rates were contested.

Table 2A

Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)

FY 2018	A	B	C		D	E	F
	<u>Investment Base</u>	<u>Net Interest</u>	<u>Net Revenues</u>		<u>COE/USBR</u>	<u>All Other</u>	<u>Total Generation</u>
1. GENERATION COSTS							
2. FEDERAL BASE SYSTEM				Equivalent Annual Costs	494,337	127,044	621,381
3. HYDRO		76,103	191,132	Percent	80%	20%	100%
4. FISH AND WILDLIFE	276,454	9,560	24,008				
5. TROJAN				Net Interest Expense	76,103	19,559	95,662
6. WNP #1							
7. CGS				MRNR	175,221	45,031	220,252
8. WNP #3							
9. SYSTEM AUGMENTATION				PNRR	15,911	4,089	20,000
10. BALANCING POWER PURCHASES							
11. TOTAL FEDERAL BASE SYSTEM	276,454	85,663	215,140				
12. NEW RESOURCES							
13. IDAHO FALLS							
14. COWLITZ FALLS							
15. OTHER LONG-TERM POWER PURCHASES							
16. TOTAL NEW RESOURCES							
17. RESIDENTIAL EXCHANGE							
18. CONSERVATION	246,937	8,539	21,445				
19. OTHER GENERATION COSTS							
20. BPA PROGRAMS	42,228	1,460	3,667				
21. WNP #3 PLANT							
22. TOTAL OTHER GENERATION COSTS	42,228	1,460	3,667				
23. TOTAL GENERATION COSTS	565,619	95,662	240,252				
24. TRANSMISSION COSTS							
25. TBL TRANSMISSION/ANCILLARY SERVICES							
26. 3RD PARTY TRANS/ANCILLARY SERVICES							
27. GENERAL TRANSFER AGREEMENTS							
28. TOTAL TRANSMISSION COSTS							
29. TOTAL PBL REVENUE REQUIREMENT		95,662	240,252				

Table 2A

Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)

FY 2019

	A	B	C		D	E	F
	<u>Investment</u> <u>Base</u>	<u>Net</u> <u>Interest</u>	<u>Net</u> <u>Revenues</u>		<u>Hydro</u>	<u>All Other</u>	<u>Total</u> <u>Generation</u>
1. GENERATION COSTS							
2. FEDERAL BASE SYSTEM				Equivalent Annual Costs	498,713	131,307	630,020
3. HYDRO		79,386	69,647	Percent	79%	21%	100%
4. FISH AND WILDLIFE	287,781	10,984	9,637				
5. TROJAN				Net Interest Expense	79,386	20,901	100,287
6. WNP #1							
7. CGS				MRNR	53,815	14,169	67,984
8. WNP #3							
9. SYSTEM AUGMENTATION				PNRR	15,832	4,168	20,000
10. BALANCING POWER PURCHASES							
11. TOTAL FEDERAL BASE SYSTEM	287,781	90,370	79,284				
12. NEW RESOURCES							
13. IDAHO FALLS							
14. COWLITZ FALLS							
15. OTHER LONG-TERM POWER PURCHASES							
16. TOTAL NEW RESOURCES							
17. RESIDENTIAL EXCHANGE							
18. CONSERVATION	226,219	8,635	7,575				
19. OTHER GENERATION COSTS							
20. BPA PROGRAMS	33,583	1,282	1,125				
21. WNP #3 PLANT							
22. TOTAL OTHER GENERATION COSTS	33,583	1,282	1,125				
23. TOTAL GENERATION COSTS	547,583	100,287	87,984				
24. TRANSMISSION COSTS							
25. TBL TRANSMISSION/ANCILLARY SERVICES							
26. 3RD PARTY TRANS/ANCILLARY SERVICES							
27. GENERAL TRANSFER AGREEMENTS							
28. TOTAL TRANSMISSION COSTS							
29. TOTAL PBL REVENUE REQUIREMENT		100,287	87,984				

Table 2B

**Equivalent Annual Costs
(\$000s)**

	A	B	C	D	E	F	G
	AVG	COMP	WT AV	2014	COMP	WT AV	2015
	LIFE	PLANT	INT	EQ ANN	PLANT	INT	EQ ANN
	LIFE	9/30/2018	RATE	COSTS	9/30/2019	RATE	COSTS
1 Corps of Engineers/Bureau of Reclamation	50	10,440,023	4.10%	\$494,337	10,744,710	3.98%	\$498,713
2 BPA F&W							
3 PBL General Plant	15	526,639	3.26%	44,932	554,929	3.24%	47,299
4 CONSERVATION	8	173,437	1.62%	21,760	180,638	1.79%	23,638
5 Sub-Total	42	1,696,389	2.01%	60,351	1,696,389	2.05%	60,370
				127,044			131,307
	WTD	INV. BASE	ANNUAL	AVG	INV. BASE	ANNUAL	
	LIFE	AS OF	DEPR/AMORT	LIFE	AS OF	DEPR/AMORT	
	LIFE	9/30/2018	DEPR/AMORT	LIFE	9/30/2019	DEPR/AMORT	
6 OFFICE FURNITURE & FIXTURES							
7 DATA PROCESSING EQUIPMENT							
8 DATA PROCESSING SOFTWARE							
9 TOTAL GENERAL PLANT - PBL CONSERVATION	8	173,437	20,162	8	180,638	21,783	
10 LEGACY							
11 CONAUG							
12 CONSERVATION ACQUISITION							
13 TOTAL CONSERVATION	42	1,696,389	40,512	42	1,696,389	40,162	

3. GENERATION EXPENSES

3.1 Introduction

This chapter compiles the expenses that are the basis for cost recovery in determination of generation revenue requirements for the rate approval period and the outyears.

3.2 Expenses

Table 3A displays the expenses used in the revenue requirement income statement and statement of cash flows of the Study. Revenue Requirement Study, BP-18-FS-BPA-02, Tables 4 and 5.

O&M program expenses are from the Integrated Program Review with revisions. *Id.* Federal Projects Depreciation calculations are found in Chapter 4 of this document. Interest expense is summarized here from the results of the annual generation repayment studies. The calculation of AFUDC is also shown in this chapter.

Debt service for Energy Northwest (EN) projects are based on the tables found in Chapter 8, Capitalized Contract Obligations, of this document.

Corps and Reclamation O&M must be functionalized between generation and the transmission component that will be included in transmission rates.

Depreciation expense, calculated using the straight-line method, is functionalized according to the associated investment used in the calculations as identified in Chapter 4 of this document.

Interest expense is calculated in the repayment studies for generation using the generation capital appropriations and BPA revenue bonds issued to Treasury at individual interest rates. Generation AFUDC is associated with BPA's direct funding of Corps and Reclamation power-related capital projects.

Table 3A

**Power Services Program Spending Levels
(\$000s)**

	A	B
	Rate Period	
	<u>2018</u>	<u>2019</u>
1 Power System Generation Resources		
2 Operating Generation		
3 COLUMBIA GENERATING STATION	270,146	327,354
4 BUREAU OF RECLAMATION	164,609	162,623
5 CORPS OF ENGINEERS	256,057	256,057
6 LONG-TERM CONTRACT GENERATING PROJECTS	<u>12,595</u>	<u>13,687</u>
7 Sub-Total	703,407	759,721
8 Operating Generation Settlements and Other Payments		
9 COLVILLE GENERATION SETTLEMENT	22,612	22,997
10 SPOKANE LEGISLATION PAYMENT	<u>0</u>	<u>0</u>
11 Sub-Total	22,612	22,997
12 Non-Operating Generation		
13 TROJAN DECOMMISSIONING	1,000	1,000
14 WNP-1&3 DECOMMISSIONING	<u>500</u>	<u>534</u>
15 Sub-Total	1,500	1,534
16 Gross Contracted Power Purchases (excluding bookout adjustments) <Note 1		
17 DSI MONETIZED POWER SALES	0	0
18 PNCA HEADWATER BENEFITS	3,100	3,100
19 HEDGING/MITIGATION		
20 OTHER POWER PURCHASES - (e.g. Short-Term)	60,484	54,409
21 TIER 2 PURCHASES	<u>37,050</u>	<u>42,115</u>
22 Sub-Total	100,634	99,624
23 Bookout Adjustments to Contracted Power Purchases <Note 1	0	0
24 Augmentation Power Purchases (includes IOU Load Reduc. and Buy Backs)		
25 AUGMENTATION POWER PURCHASES	-	12,222
26 CONSERVATION AUGMENTATION	<u>0</u>	<u>0</u>
27 Sub-Total	-	12,222
28 Exchanges & Settlements		
29 RESIDENTIAL EXCHANGE PROGRAM	317,851	317,865
31 OTHER SETTLEMENTS	<u>0</u>	<u>0</u>
32 Sub-Total	317,851	317,865
33 Renewable Generation		
34 RENEWABLES	<u>38,332</u>	<u>39,060</u>
36 Sub-Total	38,332	39,060
37 Generation Conservation		
38 CONSERVATION INFRASTRUCTURE	27,149	27,283
39 LEGACY	590	590
40 MARKET TRANSFORMATION	12,364	12,049
41 ENERGY EFFICIENCY DEVELOPMENT	8,000	8,000
42 LOW INCOME WEATHERIZATION & TRIBAL	5,523	5,627
43 CONSERVATION ACQUISITION	71,785	71,785
44 DR & SMART GRID	856	854
45 Sub-Total	126,267	126,187
46 Power System Generation Sub-Total	1,310,603	1,379,210

Table 3A

**Power Services Program Spending Levels
(\$000s)**

	A	B
	Rate Period	
	<u>2018</u>	<u>2019</u>
47		
48	Power Non-Generation Operations	
49	Power Services System Operations	
50	INFORMATION TECHNOLOGY	6,976 7,294
51	GENERATION PROJECT COORDINATION	6,174 6,409
52	SLICE IMPLEMENTATION	<u>1,024</u> <u>1,061</u>
53	Sub-Total	14,174 14,764
54	Power Services Scheduling	
55	OPERATIONS SCHEDULING	10,054 10,404
56	OPERATIONS PLANNING	<u>8,528</u> <u>8,416</u>
57	Sub-Total	18,582 18,820
58	Power Services Marketing and Business Support	
59	POWER R&D	4,705 4,600
60	SALES & SUPPORT	22,885 23,485
61	STRATEGY, FINANCE & RISK MGMT	16,852 19,037
62	EXECUTIVE AND ADMINISTRATIVE SERVICES	4,120 4,205
63	CONSERVATION SUPPORT	<u>9,094</u> <u>9,409</u>
64	Sub-Total	<u>57,655</u> <u>60,735</u>
65	Power Non-Generation Operations Sub-Total	90,411 94,319
66		
67	Power Services Transmission Acquisition and Ancillary Services	
68	PBL Transmission Acquisition and Ancillary Services	
69	POWER SERVICES TRANSMISSION & ANCILLARY SERVICES	108,555 104,198
70	3RD PARTY GTA WHEELING	91,759 92,516
71	POWER SERVICES - 3RD PARTY TRANS & ANCILLARY SVCS	2,251 2,292
72	GENERATION INTEGRATION / TS WIT	<u>12,480</u> <u>12,634</u>
73	Power Srvcs Trans Acquisition and Ancillary Services Sub-Total	215,044 211,640
74		
75	Fish and Wildlife/USF&W/Planning Council/Environmental Req	
76	BPA Fish and Wildlife	
77	Fish & Wildlife	276,713 276,704
78	USF&W Lower Snake Hatcheries	33,483 33,483
79	Planning Council	<u>11,624</u> <u>11,914</u>
80	Fish and Wildlife/USF&W/Planning Council Sub-Total	321,821 322,101
81		
82	BPA Internal Support	
83	Additional Post-Retirement Contribution	14,962 15,620
84	Agency Services G&A (excludes direct project support)	<u>64,391</u> <u>65,796</u>
85	BPA Internal Support Sub-Total	79,353 81,417
86		

Table 3A

Power Services Program Spending Levels
(\$000s)

	A	B
	Rate Period	
	<u>2018</u>	<u>2019</u>
87 Bad Debt Expense	0	0
88 Other Income, Expenses, Adjustments	(10,000)	(10,000)
89		
90		
91 Disaggregation of Selected Expenses From Revenue Requirement to RAM Cost Table		
92 RENEWABLES (line 34)	<u>38,332</u>	<u>39,060</u>
93 Tier 1 Augmentation Resource (i.e. Klondike III)	10,048	10,158
94 Renewable Generation (excl. Klondike III)	28,284	28,902
95		
96 POWER R&D (line 59)	<u>4,705</u>	<u>4,600</u>
97 Generation Conservation R&D	2,923	2,858
98 Other Power R&D	1,782	1,742
99		
100 POWER SERVICES TRANSMISSION & ANCILLARY SERVICES (line 69)	<u>108,555</u>	<u>104,198</u>
101 Transmission & Ancillary Services	75	71
102 Transmission & Ancillary Services (sys. oblig.)	34	33
103		

Table 3B

**Summary of Generation Repayment Study Data
(\$000s)**

	A	B
	<u>2018</u>	<u>2019</u>
1 INTEREST EXPENSE (GROSS)		
2 APPROPRIATIONS	56,449	63,302
3 BONDS ISSUED TO TREASURY	62,434	73,462
BOND PREMIUMS/DISCOUNTS	<u>0</u>	<u>0</u>
4 TOTAL INTEREST EXPENSE	118,883	136,764
5		
6 PLANNED AMORTIZATION		
7 APPROPRIATIONS	91,070	17,371
8 BONDS ISSUED TO TREASURY	<u>44,150</u>	<u>156,250</u>
9 TOTAL GENERATION AMORTIZATION	135,220	173,621
10 IRRIGATION ASSISTANCE	<u>27,234</u>	<u>56,573</u>
11 TOTAL AMORTIZATION/IRRIGATION	162,454	230,194

Table 3C

**Federal Projects Depreciation Summary
(\$000s)**

	<u>A</u> <u>2018</u>	<u>B</u> <u>2019</u>
1 BPA (Power + CORP GP)	18,080	13,609
2 Corps 1/ 2/	97,725	100,816
3 Reclamation	<u>28,287</u>	<u>29,641</u>
4 Total Depreciation	142,911	142,860
5 Amortization of Legacy Conservation	923	367
6 Amortization of Conservation Acquisitions	40,145	40,145
7 Amortization of CRFM Intangible Investment	10,398	10,398
8 Amortization of Fish & Wildlife	<u>35,330</u>	<u>36,548</u>
9 Total Amortization	88,504	89,166
10 Total Federal Projects Depreciation	231,415	232,027
1/ Excludes depreciation from investments paid for by BPA-TS	23	23
2/ Includes US Fish & Wildlife	3,228	3,228

Table 3D
Separation of Residential Exchange Program Support Costs
from Power Non-Generating Operations
(\$000s)

	A	B
	<u>2018</u>	<u>2019</u>
1 Strategy, Finance, & Risk Mgmt	16,852	19,037
2 Residential Exchange Program Support portion	<u>1,006</u>	<u>732</u>
3 Net to Power Non-Generating Operations (ln 1 - ln 2)	15,846	18,305
4 Executive & Administrative Svc	4,120	4,205
5 Residential Exchange Program Support portion	<u>2</u>	<u>2</u>
6 Net to Power Non-Generating Operations (ln 4 - ln 5)	4,119	4,204
7 Residential Exchange Program Support (ln 2 + ln 5)	1,008	733
8 Strategy, Finance, & Risk Mgmt (to Pwr NonGen Ops) (ln 3)	15,846	18,305
9 Executive & Administrative Svc (to Pwr NonGen Ops) (ln 6)	4,119	4,204

Table 3E
Power Services Regulatory Assets
(\$000s)

		<u>A</u>	<u>B</u>
		2018	2019
1	Terminated Nuclear Facilities	212,274	2,566
2	REP Refunds	-	-
3	Columbia River Fish Mitigation amortization	10,398	10,398
4	Conservation Measures		
5	Additions	-	-
6	Amortization	41,068	40,512
7	Direct Service Industries' benefit 1/	-	-
8	Fish and Wildlife Measures		
9	Additions	51,000	44,000
10	Amortization	35,330	36,548
11	Settlements	22,612	22,997
12	FECA 2/	-	-
13	Sponsored Conservation	-	-
14	Trojan Decommissioning/Restoration	1,000	1,000
15	Terminated Hydro Facilities	1,456	1,485
16	Capitalized Bond Premiums	-	-

1/ This is now modeled in the rate case as a power sale with offsetting augmentation purchases if needed.

2/ Not specifically broken out in expenses

Table 3F
Allowance for Funds Used During Construction
(\$000s)

	<u>A</u> <u>2018</u>	<u>B</u> <u>2019</u>
Direct Funding Projects		
1 Capital Expenditures	236,000	258,000
2 Plant-in-Service	257,891	256,380
3 SOY CWIP Balance	274,742	260,897
4 EOY CWIP Balance	252,851	262,517
5 Average CWIP Balance	263,796	261,707
6 AFUDC Rate	3.05%	3.05%
7 Total Direct Funding AFUDC	8,046	7,982
Capital Equipment		
8 Power IT	5,000	5,000
9 Corporate	5,670	5,670
10 Total Capital Equipment AFUDC	333	325
11 Total PS AFUDC	8,379	8,307

Table 3G
Prepay Program Cost Components
(\$000s)

	A	B	C	D
		<u>Interest</u>	<u>Principal</u>	<u>Total Credit</u>
1	2013	7,653	7,647	15,300
2	2014	14,775	15,825	30,600
3	2015	14,041	16,559	30,600
4	2016	13,273	17,327	30,600
5	2017	12,469	18,131	30,600
6	2018	11,628	18,972	30,600
7	2019	10,747	19,853	30,600
8	2020	9,826	20,774	30,600
9	2021	8,863	21,737	30,600
10	2022	7,854	22,746	30,600
11	2023	6,799	23,801	30,600
12	2024	5,694	24,906	30,600
13	2025	4,539	26,061	30,600
14	2026	3,329	27,271	30,600
15	2027	2,064	28,536	30,600
16	2028	<u>740</u>	<u>29,860</u>	<u>30,600</u>
17	Total	134,294	340,006	474,300

Table 3H
Calculation of RCD Effect
(\$000s)

	A	B	C	D
	Initial Proposal, No EN Debt Extension		Initial Proposal, W/ EN Debt Extension	
	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>
1 Non-Federal Debt Service	490,562	420,704	250,530	215,113
2 Depreciation	144,092	144,065	144,092	144,065
3 Amortization	86,796	87,458	86,796	87,458
4 Federal Net Interest	-	-	-	-
5 Expense Offset	95,662	100,287	89,224	81,840
6 MRNR	220,252	67,984	478,493	288,354
7 Total	1,037,363	820,499	1,049,135	816,831
8				
9				
10 Difference				
11				
12	<u>2018</u>	<u>2019</u>		
13 Non-Federal Debt Service	(240,032)	(205,591)		
14 Depreciation	-	-		
15 Amortization	-	-		
16 Federal Net Interest	-	-		
17 Expense Offset	(6,438)	(18,447)		
18 MRNR	258,242	220,370		
19 RCD Effect	11,772	(3,668)		

Table 3I
Calculating the EN Debt Extension Revenue Requirement
(\$000s)

	A	B
	<u>2018</u>	<u>2019</u>
Input from Repayment Study		
1 Non-Federal Principal	518,684	132,037
2 Non-Federal Interest	230,598	224,165
3 Federal Principal	369,937	423,028
4 Bond Premiums	11,719	10,680
5 Bond Discounts		
6 Federal Interest	120,975	115,718
7 Irrigation Assistance	<u>27,234</u>	<u>56,573</u>
8 Total Repayment Debt Service	1,279,147	962,200
9		
10 Calculation of Revenue Requirement		
11 Expense	-	-
12 Non-Federal Debt Service (Ln 1 + Ln 2)	250,530	215,113
13 Depreciation	144,092	144,065
14 Amortization	86,796	87,458
15 Expense Offset	-	-
16 Federal Net Interest 1/	89,224	81,840
17 MRNR 2/	<u>478,493</u>	<u>288,354</u>
18 Total Revenue Requirement	1,049,135	816,831
19		
20		
21		
22		
23 1/ Net Interest Calculation		
24 Gross Federal Interest	132,694	126,398
25 Prepay Interest	11,628	10,747
26 AFUDC	(8,379)	(8,307)
27 Capitalization Adjustment	(45,937)	(45,937)
28 Interest Credit	<u>(781)</u>	<u>(1,061)</u>
29 Net interest	89,224	81,840
30		

Table 3I
Calculating the EN Debt Extension Revenue Requirement
(\$000s)

	A	B
	<u>2018</u>	<u>2019</u>
31 Calculation of Interest Credit		
32 Beginning cash reserves	170,000	180,300
33 ending cash reserves	180,300	139,800
34 Average cash reserves	175,150	160,050
35 Income Rates (melded)	0.45%	0.66%
36 Interest credit on reserves	781	1,061
37 Prepay Program Interest Earnings	=	=
38 Total interest credit	781	1,061
39		
40		
41 2/ Calculation of MRNR		
42 Depreciation	144,092	144,065
43 Amortization	86,796	87,458
44 Non-Cash Expenses (EN)	141,088	168,575
45 Cash Freed up by DSR Refinancing	113,888	1,550
46 Capitalization Adjustment	(45,937)	(45,937)
47 Prepay Interest	11,628	10,747
48 Prepay Credits	(30,600)	(30,600)
49 Non-Cash Revenues	(3,524)	(3,524)
50 Federal Principal Payments	(369,937)	(423,028)
51 Repayment of EN Line of Credit	(498,752)	(141,088)
52 Irrigation Assistance Payments	<u>(27,234)</u>	<u>(56,573)</u>
53 MRNR	478,493	288,354

Table 3J
Agency Services G&A Allocators

	A COST POOL	B BP-18 Rates/IPR		C BP-16 Rates		F DRIVERS	G COMMENTS
		POWER	TRAN	POWER	TRAN		
1	G&A EXEC/PLANNING/ GOVERNANCE	50%	50%	50%	50%	Standard rate with no consistent, measurable method of assigning support costs. Functions are general in nature. This rate does not get adjusted year-to-year. Appropriateness of costs charged to this pool were reviewed.	Corporate awards were moved from this cost pool to a separate awards pool and Asset Management was moved from Strategy to Finance.
2	G&A APPLICATION SYSTEM SUPPORT	35%	65%	35%	65%	Applications in this cost pool follow the profile of benefiting Power and Transmission at a rate of 35%-65%.	Applications should fit the profile of 35%-65% to be in this IT application cost pool.
3	G&A SECURITY SERVICES	12%	88%	12%	88%	Rate established by a direction of effort study (time spent by security staff for Power and Transmission).	This cost pool includes security for the Transmission system and BPA administrative buildings. Headquarters is a very small part of the overall program.
4	G&A LEGAL SERVICES	50%	50%	50%	50%	Standard rate that does not get adjusted year-to-year. Cost charged to the pool are reviewed to determine that they are appropriate.	Higher percents were budgeted as Corporate Business Unit rather than direct charged to the business lines in the fiscal year 2016 budget.
5	G&A HUMAN RESOURCE SERVICES	23%	77%	24%	76%	BFTE count by business unit.	Organizationally the library was moved from HR to Communications in 2016 but the library remains in the HR cost pool as the benefits are more consistent with the HR cost pool. Administrator's Award Program moved to Public Affairs cost pool. Medical surveillance moved to Safety cost pool.
6	G&A ACCOUNTING & FINANCE	45%	55%	45%	55%	Most costs in this pool are 50-50%. Exceptions are budget, payroll and Accounts Payable. Rate impact for these costs are based on budget support for Power and Transmission, BFTE for payroll, and number of vouchers for AP.	Asset Management moved from Strategic Affairs to Finance.
7	G&A SAFETY	6%	94%	18%	82%	Direction of effort study looking at business line program support provided by the Safety organization.	Safety is a key agency target and budgets were increased accordingly. Safety had a major reorganization in FY16. Medical surveillance was moved from HR to Safety.
8	STRATEGIC INTEGRATION	50%	50%	50%	50%	Standard agency rate that does not get adjusted year-to-year. Confirmed that the rate is still appropriate. As initiatives mature, they are moved as direct charge into the business lines.	Certain functions for this program are ramping down. The EIM/SCED initiative is being transformed into the Commercial Operations KSI and may be moved to the business lines.
9	RISK MANAGEMENT	62%	38%	60%	40%	Direction of effort study looking at risk support for Power and Transmission Services.	Allocation percentages by department are provided by the Risk Office.
10	G&A IT ADMINISTRATION	29%	71%	31%	69%	Rate based on weighted average for the other IT cost pools.	More quality assurance, administration and training moved into the IT Administration pool starting in fiscal year 2015.
11/12	DEDICATED IT PROJECTS	100%	100%	100%	100%	Dedicated applications for Power and Transmission Services. Rate does not get adjusted year-to-year.	This actually consists of two separate pools, one for Power and one for Transmission.
13	G&A IT INFRASTRUCTURE	22%	78%	25%	75%	FTE count by business line. For comparative purposes also looked at number of IT devices and phone services by business line which would have produced similar results.	IT provides a detailed list of devices by Department and Employee. These are assigned to high level agency functions in support of Power, F&W and Transmission.
14	G&A CROSS AGENCY IT PROJECTS	50%	50%	50%	50%	Standard agency rate that does not get adjusted year-to-year. Projects in this cost pool benefit Power and Transmission Services equally.	Very few projects are charged to this 50-50% pool.
15	G&A WORKPLACE SERVICES	46%	54%	47%	53%	B/CFTE count by business unit for employees in leased space. Also use a combination of B/CFTE by location for other services, as applicable to the nature of the cost.	Almost 40% of the costs in this pool are for leases at HQ, Washington DC (DOE Forrestal), and field administrative offices. Munro maintenance, janitorial, utilities and furniture are charged into this Corporate workplace services cost pool.
16	SUPPLY CHAIN ADMINISTRATION	11%	89%	7%	93%	Overall rate based on program level support by Supply Chain management.	Rate is based on the underlying rates for all other Supply Chain cost pools.
17	G&A PUBLIC AFFAIRS	50%	50%	50%	50%	Standard agency rate that does not get adjusted year-to-year. Costs charged into this cost pool were reviewed for appropriateness.	Organizationally the library was moved from HR to Communications in 2016. Communications picked up the Administrator's Award program from HR.
18	SUPPLY CHAIN PURCHASING SERVICES	64%	36%	66%	34%	Weighted average of actual costs charged to environment, EE, Power, IT and Corporate work orders within the Agency Purchasing cost pool.	The rate is determined by Work Order costs in this cost pool charged specifically to IT, Eniv, F&W, Power, etc.
19	TECHNOLOGY INNOVATION	50%	50%	50%	50%	Standard agency rate that does not get adjusted year-to-year.	As projects mature, they are passed to either Power or Transmission.
21/22	G&A WORKPLACE DIRECT PROJECTS	100%	100%	100%	100%	Dedicated workplace services for Power and Transmission	There are two cost pools for Workplace Direct Projects--one exclusively for Power and the other one for Transmission.
23	BILLING & METERING SERVICES	48%	52%	47%	53%	Direction of effort study with information provided by the responsible Department managers.	Study looks at drivers such as the number of bills, complexity of bills, and metering services.
24	CONTRACTING & FORECASTING SRVC	47%	53%	54%	46%	Direction of effort study with information provided by the responsible Department managers.	Increase to Trans due to more workload for CCM/CDM associated with # of contracts, active tasks, contract templates, workflow and internal users of CCM and CDM.
	AWARDS	40%	60%	0%	0%	Based on overall Corporate G&A personnel costs for Power and Transmission	This is a new cost pool. Costs were moved from the G&A Exec/Planning/Governance cost pool.

Table 3K

**Breakout of Other Income & Expense
(\$000s)**

	A	B
	2018	2019
1 IPR Undistributed Reduction	(10,000)	(10,000)
2 Expense Offset	(60,500)	(60,500)
3 RCD Effect	11,772	(3,668)
4 RCD Offset	<u>(70,000)</u>	<u>-</u>
5 Total	(128,728)	(74,168)

4. FCRPS GENERATION INVESTMENT BASE

4.1 Introduction

This chapter documents the development of the FCRPS generation investment base by year for the rate approval period and the outyears. The investment data are the source of depreciation calculations and provide certain inputs to the generation repayment studies. It is also the basis for allocations of net interest expense and planned net revenues in the development of the COSA tables and the generation inputs to ancillary services.

4.2 Methodology

The FCRPS plant investment information is separately compiled for the Corps, Reclamation, and BPA, including BPA conservation and fish and wildlife investments. BPA generation (general) plant investment consists of office furniture and fixtures and data processing software and hardware associated with the Power Business Line, including the Energy Efficiency Group. Historical investment data are taken from the supporting documents of FCRPS financial statements. All plant investment is depreciated and intangible plant is amortized using the straight-line method.

For BPA facilities, forecasted depreciation expense is calculated consistent with the group concept methodology used for plant accounting records. For general plant categories, average service lives incorporate an adjustment for salvage applicable to the individual groups. Both historical investment and forecast additions are depreciated according to their adjusted group life.

BPA conservation acquisition investments made after 2011 are amortized over 12 years. Beginning with 2016, BPA discontinued the capitalization of conservation investments and converted it into an expense program. Legacy conservation investments occurred through FY 1999 and have a 20 year life. All other conservation investments have been fully amortized and no longer appear in the revenue requirement.

BPA fish and wildlife investments are amortized over 15 years.

Corps and Reclamation investments are depreciated according to the weighted-average service lives of the projects. Depreciation forecasts factor in plant retirements using the 5-year average of plant retirement by project

Projected investments and projected depreciation expenses are accumulated with historical amounts to provide projected cumulative investments and accumulated depreciation for each forecasted year.

The investment base is calculated for each year of the rate period and outyears as an annual average.

Table 4A

**FCRPS Investment Base
FY 2018
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2017</u>	<u>9/30/2018</u>	<u>2018</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	8,035,621	8,261,889	8,148,755
4 TRANSMISSION	<u>2,700</u>	<u>2,700</u>	<u>2,700</u>
5 TOTAL COMPLETED PLANT	8,038,321	8,264,589	8,151,455
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	3,155,134	3,263,244	3,209,189
8 TRANSMISSION	<u>966</u>	<u>1,002</u>	<u>984</u>
9 TOTAL ACCUMULATED DEPRECIATION	3,156,100	3,264,246	3,210,173
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,880,487	4,998,645	4,939,566
12 TRANSMISSION	<u>1,734</u>	<u>1,698</u>	<u>1,716</u>
13 TOTAL NET COMPLETED PLANT	4,882,221	5,000,343	4,941,282
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,980,004	2,088,000	2,034,002
17 TRANSMISSION	<u>87,434</u>	<u>87,434</u>	<u>87,434</u>
18 TOTAL COMPLETED PLANT	2,067,438	2,175,434	2,121,436
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	714,899	742,020	728,459
21 TRANSMISSION	<u>34,406</u>	<u>35,572</u>	<u>34,989</u>
22 TOTAL ACCUM DEPRECIATION	749,305	777,592	763,448
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,265,106	1,345,981	1,305,543
25 TRANSMISSION	<u>53,028</u>	<u>51,862</u>	<u>52,445</u>
26 TOTAL NET COMPLETED PLANT	1,318,133	1,397,843	1,357,988
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	1,754,993	1,696,389	1,725,691
29 ACCUM PREPAID EXPENSE	1,458,220	1,499,288	1,478,754
30 NET CONSERVATION	296,773	197,101	246,937
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	505,393	526,639	516,016
33 ACCUM PREPAID EXPENSE	236,540	242,584	239,562
34 NET FISH AND WILDLIFE	268,853	284,055	276,454
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	166,238	173,437	169,838
37 ACCUMULATED DEPRECIATION	118,570	136,650	127,610
38 NET BPA PLANT INVESTMENT	47,668	36,787	42,228
39 TOTAL NET PLANT INVESTMENT	6,813,648	6,916,129	6,864,889

Table 4B

**FCRPS Investment Base
FY 2019
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2018</u>	<u>9/30/2019</u>	<u>2019</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	8,261,889	8,471,354	8,366,621
4 TRANSMISSION	<u>2,700</u>	<u>2,700</u>	<u>2,700</u>
5 TOTAL COMPLETED PLANT	8,264,589	8,474,054	8,369,321
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	3,263,244	3,374,445	3,318,845
8 TRANSMISSION	<u>1,002</u>	<u>1,038</u>	<u>1,020</u>
9 TOTAL ACCUMULATED DEPRECIATION	3,264,246	3,375,483	3,319,865
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,998,645	5,096,909	5,047,776
12 TRANSMISSION	<u>1,698</u>	<u>1,662</u>	<u>1,680</u>
13 TOTAL NET COMPLETED PLANT	5,000,343	5,098,571	5,049,456
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	2,088,000	2,183,222	2,135,611
17 TRANSMISSION	<u>87,434</u>	<u>87,434</u>	<u>87,434</u>
18 TOTAL COMPLETED PLANT	2,175,434	2,270,656	2,223,045
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	742,020	770,495	756,257
21 TRANSMISSION	<u>35,572</u>	<u>36,738</u>	<u>36,155</u>
22 TOTAL ACCUM DEPRECIATION	777,592	807,233	792,412
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,345,981	1,412,728	1,379,354
25 TRANSMISSION	<u>51,862</u>	<u>50,696</u>	<u>51,279</u>
26 TOTAL NET COMPLETED PLANT	1,397,843	1,463,424	1,430,633
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	1,696,389	1,696,389	1,696,389
29 ACCUM PREPAID EXPENSE	1,499,288	1,441,051	1,470,170
30 NET CONSERVATION	197,101	255,338	226,219
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	526,639	554,929	540,784
33 ACCUM PREPAID EXPENSE	242,584	263,422	253,003
34 NET FISH AND WILDLIFE	284,055	291,507	287,781
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	173,437	180,638	177,038
37 ACCUMULATED DEPRECIATION	136,650	150,259	143,455
38 NET BPA PLANT INVESTMENT	36,787	30,379	33,583
39 TOTAL NET PLANT INVESTMENT	6,916,129	7,139,219	7,027,672

Table 4C
(\$000s)

FERC ACCOUNT 391.1 OFFICE FURNITURE AND FIXTURES
ASL, Remaining Life, Annual Percent=5.27%

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2017	-	-	-	95	1,812	1,910	98
2	2018	-	-	-	95	1,907	1,909	2
3	2019	-	-	-	2	1,909	1,909	-

Table 4D
(\$000s)

FERC ACCOUNT 391.2 DATA PROCESSING EQUIPMENT
ASL, Remaining Life, Annual Percent=20%

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2017				5,133	25,199	38,054	12,855
2	2018				4,472	29,671	38,054	8,383
3	2019				3,841	33,512	38,054	4,542

Table 4E
(\$000s)

FERC ACCOUNT 391.3 DATA PROCESSING SOFTWARE
ASL, Remaining Life, Annual Percent=20% 18.33% as of FY 2006

A	B	C	D	E	F	G	H	I	J
<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>	<u>CORP ADDITNS</u>	<u>PS ADDITNS</u>
1 2017	10,611	1,061	2,122	15,746	86,602	114,207	27,605	5,611	5,000
2 2018	7,200	720	1,440	12,704	99,306	121,408	22,101	5,900	1,300
3 2019	7,201	720	1,440	8,957	108,263	128,608	20,345	5,901	1,300

Table 4F
(\$000s)

FERC ACCOUNT 397/398 COMMUNICATION/MISC EQUIPMENT
ASL, Remaining Life, Annual Percent=6.70%

A	B	C	D	E	F	G	H
<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1 2017	0	-	0	582	4,616	8,685	4,069
2 2018	0	-	0	582	5,198	8,685	3,487
3 2019	0	-	0	582	5,780	8,685	2,905

Table 4G
(\$000s)

SUMMARY - PBL GENERAL PLANT

A	B	C	D	E
<u>FY</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1 2017	21,783	118,570	166,238	47,668
2 2018	18,080	136,650	173,437	36,787
3 2019	13,609	150,259	180,638	30,379

Table 4H

**BPA FISH & WILDLIFE INVESTMENT
(\$000s)**

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2017	40,000	1,333	2,667	32,698	236,540	505,393	268,853
2	2018	50,532	1,684	3,369	35,330	242,584	526,639	284,055
3	2019	44,000	1,467	2,933	36,548	263,422	554,929	291,507

Table 4I

**AMORTIZATION OF BPA CONSERVATION INVESTMENT
12-year Life (post-2011 investments)
(\$000s)**

Conservation Acquisition, 12-year life (post-2011)

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2017	-	-	-	40,145	189,561	485,027	295,466
2	2018	-	-	-	40,145	229,706	485,027	255,321
3	2019	-	-	-	40,145	269,851	485,027	215,176

Legacy, 20-year life (pre-2000)

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2017	-	-	-	1,952	1,210,055	1,211,362	1,307
2	2018	-	-	-	923	1,210,978	1,211,362	384
3	2019	-	-	-	367	1,211,345	1,211,362	17

Table 4J
Bureau of Reclamation:
Investment and Depreciation
(\$000s)

	A	B	C	D	E	F	G	H	I	J	K
1											
2		5-Year		2018	2018	2018		2019	2019	2019	
3		Average	INVESTMENT		DEPR	ACCUM	INVESTMENT		DEPR	ACCUM	INVESTMENT
4		Retirements	9/30/17	ADDTNS	EXP	DEPR	9/30/18	ADDTNS	EXP	DEPR	9/30/19
5	BOISE										
6	GENERATION	1	35,104	14,568	565	13,025	49,671	16,562	773	13,798	66,232
7	COLUMBIA BASIN										
8	GENERATION	50	1,595,667	72,239	21,757	604,627	1,667,856	71,332	22,713	627,340	1,739,138
9	TRANSMISSION /DELIVERY		<u>84,549</u>		<u>1,127</u>	<u>33,314</u>	<u>84,549</u>		<u>1,127</u>	<u>34,442</u>	<u>84,549</u>
10	TOTAL		1,680,216	72,239	22,884	637,942	1,752,405	71,332	23,840	661,782	1,823,687
11	GREEN SPRINGS										
12	GENERATION	-	11,495	1,103	161	9,054	12,598	754	173	9,227	13,352
13	HUNGRY HORSE										
14	GENERATION	4	151,150	13,433	2,105	65,962	164,579	6,377	2,237	68,199	170,952
15	TRANSMISSION /DELIVERY		<u>1,745</u>		<u>23</u>	<u>1,838</u>	<u>1,745</u>		<u>23</u>	<u>1,861</u>	<u>1,745</u>
16	TOTAL		152,895	13,433	2,128	67,801	166,324	6,377	2,260	70,061	172,697
17	MINIDOKA-PALISADES										
18	GENERATION	29	164,172	6,737	2,234	43,929	170,880	281	2,280	46,209	171,132
19	TRANSMISSION /DELIVERY		<u>1,140</u>		<u>15</u>	<u>420</u>	<u>1,140</u>		<u>15</u>	<u>435</u>	<u>1,140</u>
20	TOTAL		165,312	6,737	2,249	44,349	172,020	281	2,295	46,644	172,272
21	YAKIMA										
22	GENERATION	-	22,417	-	299	5,422	22,417	-	299	5,721	22,417
23											
24	TOTAL USBR		2,067,438	108,080	28,287	777,592	2,175,434		29,641	807,233	2,270,656
25											
26	GENERATION		1,980,004		27,121	742,020	2,088,000		28,475	770,495	2,183,222
27	TRANSMISSION		<u>87,434</u>		<u>1,166</u>	<u>35,572</u>	<u>87,434</u>		<u>1,166</u>	<u>36,738</u>	<u>87,434</u>
28	TOTAL		2,067,438		28,287	777,592	2,175,434		29,641	807,233	2,270,656

Table 4K

Corps of Engineers: Investment and Depreciation
(\$000s)

	A	B	C	D	E	F	G	H	I	J	K	L
1			5-Year		2018	2018	2018		2019	2019	2019	
2			Average	INVESTMENT		DEPR	ACCUM	INVESTMENT		DEPR	ACCUM	INVESTMENT
3			Retirements	9/30/17	ADDTNS	EXP	DEPR	9/30/18	ADDTNS	EXP	DEPR	9/30/19
4		BONNEVILLE										
5		GENERATION	789	1,184,805	40,621	16,063	517,400	1,224,637	8,399	16,379	533,779	1,232,247
6		TRANSMISSION		<u>2,700</u>		<u>36</u>	<u>1,002</u>	<u>2,700</u>		<u>36</u>	<u>1,038</u>	<u>2,700</u>
7		TOTAL		1,187,505	40,621	16,099	518,402	1,227,337	8,399	16,415	534,817	1,234,947
8		OTHER PROJECTS										
9		(GENERATION ONLY)										
10		ALBENI FALLS	444	75,062	631	1,002	28,814	75,249	3,985	1,027	29,841	78,790
11		CHIEF JOSEPH	382	829,627	4,052	11,086	380,573	833,297	15,053	11,208	391,781	847,969
12		COUGAR	0	54,375	1,793	737	17,017	56,169	785	754	17,771	56,954
13		DETROIT-BIG CLIFF	81	101,208	2,930	1,368	41,825	104,057	3,128	1,408	43,233	107,104
14		DWORSHAK	64	328,008	7,014	4,420	149,037	334,958	15,708	4,570	153,607	350,602
15		GREEN PETER-FOSTER	13	69,469	2,986	946	31,573	72,442	3,430	989	32,562	75,859
16		HILLS CREEK	14	48,970	1,727	664	16,666	50,683	1,509	686	17,352	52,178
17		ICE HARBOR	48	242,565	28,793	3,426	110,465	271,310	27,037	3,797	114,262	298,299
18		JOHN DAY	210	583,554	14,908	7,879	288,781	598,252	21,558	8,119	296,900	619,600
19		LIBBY	374	461,862	0	6,156	209,039	461,488	0	6,151	215,190	461,114
20		LITTLE GOOSE	49	258,008	6,087	3,480	134,247	264,046	4,093	3,548	137,795	268,090
21		LOOKOUT POINT-DEXTER	801	132,009	1,353	1,764	52,343	132,561	300	1,764	54,107	132,060
22		LOST CREEK	50	33,245	840	449	17,085	34,035	0	453	17,538	33,985
23		LOWER GRANITE	357	418,222	3,487	5,597	190,868	421,352	3,155	5,637	196,505	424,150
24		LOWER MONUMENTAL	61	282,858	5,929	3,811	150,299	288,726	1,607	3,860	154,159	290,272
25		MCNARY	57	507,001	15,177	6,861	251,291	522,121	34,243	7,190	258,481	556,307
26		THE DALLES	839	495,920	11,483	6,683	268,425	506,564	17,084	6,862	275,287	522,809
27		LOWER SNAKE F&W		250,510	0	3,340	62,462	250,510	0	3,340	65,802	250,510
28		COLUMBIA R. FISH BYPASS	<u>180</u>	<u>1,678,343</u>	<u>81,269</u>	<u>22,378</u>	<u>345,034</u>	<u>1,759,432</u>	<u>53,204</u>	<u>23,459</u>	<u>368,493</u>	<u>1,812,456</u>
29		TOTAL OTHER		6,850,816	190,459	92,047	2,745,844	7,037,251	205,879	94,822	2,840,666	7,239,106
30												
31		TOTAL CORPS		8,038,321	231,080	108,146	3,264,246	8,264,589	214,278	111,237	3,375,483	8,474,054
32												
33		GENERATION		8,035,621		108,110	3,263,244	8,261,889		111,201	3,374,445	8,471,354
34		TRANSMISSION		<u>2,700</u>		<u>36</u>	<u>1,002</u>	<u>2,700</u>		<u>36</u>	<u>1,038</u>	<u>2,700</u>
35		TOTAL		8,038,321		108,146	3,264,246	8,264,589		111,237	3,375,483	8,474,054
36												
37		1/ Includes USFW Plant Investment		244,851		3,265	63,017	244,851		3,265	66,282	244,851
38		2/ Includes FAS 71 Intangible Asset		779,838		10,398	89,604	779,838		10,398	100,002	779,838

5. PROJECTED CASH BALANCES / INTEREST CREDITS

5.1 Introduction

This chapter documents the projection of the generation interest income (credited to interest expense) to be earned during the rate approval period and the outyears on BPA's projected cash balances and on funds attributable to generation to be returned to Treasury at year-end.

5.2 Interest credits on projected reserves for risk

The internal cash flows from revenue requirements are added to the ending rate period reserves for risk balances separately for the program and averaged. The projected interest earnings rate is multiplied by the average reserves balance to determine the annual interest income on the BPA Fund/Investments. The resulting interest income is applied as a credit against interest expense in the generation revenue requirements.

5.3 Interest credits on reserves not for risk

Reserves not for risk are those funds dedicated to specific purposes. Generally these funds were not raised through power rates. The interest income on these reserves is calculated in the same way as that for reserves for risk.

5.4 Interest income (repayment program calculation)

The interest income rates listed in this chapter are calculated and used in repayment studies to determine an interest income credit on funds collected during each year for year-end payment of amortization and interest on Corps and Reclamation appropriations and bonds BPA issued to Treasury. The repayment program assumes that cash accumulates at a uniform rate throughout the year, except for interest paid on bonds issued to Treasury at mid-year. In the repayment study output, such as in Table 11C of this document, the interest income is identified as the "float."

5.5 Allocation of Interest Credit

The interest credit is a component in the calculation of net interest, offsetting interest accrued on outstanding Treasury bonds and appropriations. The credit is allocated between the two cost pools. The Composite cost pool receives an interest credit based on \$495.6 million in reserves, the amount of reserves attributed to Power at the end of FY 2001, with adjustments. The amount of reserves has been adjusted for receipts/payments related to pre-2002 transactions that have not been distributed to Slice customers.

The Non-Slice cost pool receives a credit that is the net of the total annual credit calculated in the generation revenue requirement less the amount calculated for the Composite cost pool and the interest earned on the prepay funds. The Non-Slice allocation may be negative or positive depending on the relationship between the Composite cost pool allocation and the total annual credit.

TABLE 5A
Interest Income from Projected Cash Balances
Generation Revenue Requirement
(\$000s)

	A	B
Calculation of Total Interest Income	<u>2018</u>	<u>2019</u>
1 Cash flow generated	20,000	20,000
2		
Reserves for Risk		
3 SOY Cash Balance	21,000	41,000
4 EOY Cash Balance	41,000	61,000
5 Average Cash Balance	31,000	51,000
6		
7 Interest Income Rate	0.45%	0.66%
8 Interest on BPA Fund/Investments	138	338
9		
10 Repayment Study Interest Credit	611	1,144
11		
12 Reserves not for Risk		
13 SOY Cash Balance	149,000	139,300
14 EOY Cash Balance	139,300	78,800
15 Average Cash Balance	144,150	109,050
16 Interest Income	643	723
17		
18 Prepay Program Proceeds		
19 SOY Cash Balance	0	0
20 EOY Cash Balance	0	0
21 Average Cash Balance	0	0
22 Interest Income	0	0
23		
24 Total Interest Credit (ln 8 + 10 + 16)	1,392	2,205
25		
26		
27 Allocation between TRM Cost Pools	<u>2018</u>	<u>2019</u>
28 Reserves Prior to FY 2002	570,255	570,255
29 Adjustments for pre-2002 Sales/Purchases	0	0
30 Other Adjustments	<u>0</u>	<u>0</u>
31 Total Composite Cost Pool Reserves (ln 23 + ln 24 + ln 25)	570,255	570,255
32 Interest rate	0.45%	0.66%
33 Composite Pool interest credit (ln 26 X ln 27)	(2,543)	(3,781)
34 Total interest credit from Rev Req	(1,392)	(2,205)
35 Non-Slice Pool interest credit (ln 29 - ln 28)	1,151	1,576

Table 5B
Interest Income from Projected Cash Balances
Generation Current Revenue Test
(\$000s)

	A	B
	<u>2018</u>	<u>2019</u>
1 Annual Cash Surplus/(Deficit)	(100,021)	(14,469)
2		
3 Reserves for Risk		
4 SOY Cash Balance	21,000	(18,521)
5 EOY Cash Balance	(18,521)	(93,490)
6 Average Cash Balance	1,240	(56,005)
7		
8 Interest Income Rate	0.45%	0.66%
9 Interest on BPA Fund/Investments	6	(371)
10		
11 Repayment Study Interest Income	611	1,144
12		
13 Reserves not for Risk		
14 SOY Cash Balance	149,000	139,300
15 EOY Cash Balance	139,300	78,800
16 Average Cash Balance	144,150	109,050
17 Interest Income	643	723
18		
19 Annual Interest Income	1,260	1,496

Table 5C
Interest Income from Projected Cash Balances
Generation Revised Revenue Test
(\$000s)

	A	B
	<u>2018</u>	<u>2019</u>
1 Annual Cash Surplus/(Deficit)	9	40,553
2		
3 Reserves for Risk		
4 SOY Cash Balance	21,000	81,509
5 EOY Cash Balance	81,509	61,561
6 Average Cash Balance	51,254	71,535
7		
8 Interest Income Rate	0.45%	0.66%
9 Interest on BPA Fund/Investments	229	474
10		
11 Repayment Study Interest Income	611	1,144
12		
13 Reserves not for Risk		
14 SOY Cash Balance	149,000	139,300
15 EOY Cash Balance	139,300	78,800
16 Average Cash Balance	144,150	109,050
17 Interest Income	643	723
18		
19 Annual Interest Income	1,483	2,341

6. INTEREST RATES FOR TREASURY SOURCES OF CAPITAL AND PRICE DEFLATORS

6.1 Introduction

Interest rates on bonds issued by BPA to Treasury and interest rates for Corps and Reclamation appropriations are used in development of repayment studies and projections of Federal interest expense in revenue requirements. Price deflators are used for developing spending levels in revenue requirements.

6.2 Source of Forecasts

To project interest rates on bonds issued to Treasury, BPA uses Treasury yield curve forecasts provided by the Global Insights Group (GI). GI is also the source of price deflators that BPA treats as escalators for purposes of developing spending levels. GI develops the price deflators taking into account projections of Gross Domestic Product (GDP). The GDP consists of the sum of consumption, investment, government purchases and net exports, excluding transfers to foreigners.

6.3 Interest Rate Projections

Projected interest rates for BPA bonds issued to Treasury are based on GI's yield curve projections of Treasury market rates, plus a markup of up to 56 basis points depending on the length of time to maturity. The markup estimate reflects an interagency agreement that Treasury price BPA bonds at a level comparable to securities (bonds) issued by U.S. government corporations. The markup estimate reflects the average basis point markup on recent intermediate and long-term bonds issued by BPA.

Interest rates on projected capital investments funded by appropriations are also based on GI's projections of Treasury yield curves. The yield curves used for appropriations do not include the basis point markup.

6.4 Deflators

The current and cumulative price deflator used to escalate midyear dollars are derived from the fiscal and calendar year price deflators provided by GI. They are calculated as follows:

$$[(FY_1/100) \times 0.5] + 1 = \text{Cumulative Price Deflator}_1$$

The fiscal year GDP price deflator for the current year is divided by one hundred and multiplied by one half. The result, when added to one, yields the cumulative price deflator for the first year.

$$[1 + (FY_t/100)] \times \text{Cumulative Price Deflator}_{t-1} = \text{Cumulative Price Deflator}_t, \text{ when } t > 1$$

The fiscal year GDP price deflator for a future year is divided by one hundred and added to one. The result, when multiplied by the cumulative price deflator from the previous year, yields the cumulative price deflator for the each successive year.

To the extent deflators are used in developing the FY 2018-2019 spending levels they are based on the price deflators from the Third Quarter, August 2016 GI Base Case forecast.

memorandum

DATE: 11/30/2016

REPLY TO
ATTN OF: FTC-2

SUBJECT: FY 2017 Interest Rate and Inflation Forecast

TO: See Attached "cc:" List

Please see the attached BPA interest rate and inflation forecast for the period FY 2017 through 2046.

These forecasts provide an internally consistent basis for BPA decisions regarding debt management, budget formulation and other financial analyses, as well as capital budgeting and strategic planning efforts. The FY 2017 forecast is summarized in the following tables:

- Table 1: 30 Year Treasury Yields and BPA Borrowing Rates
- Table 2: Forecast Comparison – 30 Year BPA Borrowing Rates – Callable at Par
- Table 3: 20 Year Treasury Yields and BPA Borrowing Rates
- Table 4: 15 Year Treasury Yields and BPA Borrowing Rates
- Table 5: BPA FY 2017 Appropriation Borrowing Rates
- Table 6: BPA FY 2017 BPA Borrowing Rates – No Premium
- Table 7: BPA FY 2017 BPA Borrowing Rates – Coupon Scale-Down
- Table 8: BPA FY 2017 BPA Borrowing Rates – Callable at Par
- Table 9: BPA FY 2017 Third-Party Taxable Borrowing Rates
- Table 10: BPA FY 2017 Third-Party Tax-Exempt Borrowing Rates
- Table 11: BPA FY 2017 FERC Borrowing Rates (Bank Prime)
- Table 12: BPA FY 2017 May 3 Month LIBOR Rates
- Table 13: Comparison of FY 2017 Inflation Forecast Components

Borrowing Rate Forecast Methodology

The FY 2017 forecast is based on the Global Insight (GI) Third Quarter August 2016 Long-Term Economic Outlook.

Tables 1, 3, and 4 illustrate the components of BPA's Treasury borrowing rate forecasts. GI calendar year (CY) projections of 30 Year Treasury bond yields are shown in Column A. BPA fiscal year (FY) projections are shown in Column B. Column C, D, and E reflect BPA's Treasury borrowing rate options.

BPA borrowing rates from the U.S. Treasury reflect a mark-up over the Treasury yield curve. Table 6 is the Government Agency borrowing rate and reflects the rate BPA would borrow at without a call premium. The other two rates {Table 7 and Table 8} reflect the two additional borrowing options BPA can exercise with Treasury: callable at par and coupon-scale down. A callable at par call option allows BPA to redeem the

bond before maturity without paying a call premium at the time of the call. The cost of this call option results in a mark-up to the coupon rate, resulting in higher interest expense paid over the life of the bond. With a coupon scale down call option the call premium is determined at the time of bond issuance for each option call date over the bond's term; this call premium is only paid if the bond is called. In addition to paying a call premium at the time the bond is called, there is also a mark-up to the coupon rate for the coupon scale down option. The premium for these two call options are calculated using historical spread premiums.

Table Descriptions

Tables 1, 3, and 4: Shows the steps involved to arrive at the BPA borrowing rate.

Table 2: Compares the current forecast of the BPA Borrowing Rate - Callable at Par to the FY 2016 forecast.

Table 5: Forecasts a rate equivalent to the Treasury yield curve.

Table 6: Forecasts the rate at which Bonneville would borrow from the U.S. Treasury for a bullet bond with no call option.

Table 7: Forecasts the rate at which Bonneville would borrow from the U.S. Treasury for a bullet bond with a coupon scale-down call option.

Table 8: Forecasts the rate at which Bonneville would borrow from the U.S. Treasury for a bullet bond with a callable at par call option.

Table 9: Forecasts the rate at which Bonneville would back third-party bonds on a taxable basis, as with the Lease Purchase Program.

Table 10: Forecasts the rate at which Bonneville would back third-party bonds on a tax-exempt basis, as with Bonneville-backed Energy Northwest bonds.

Table 11: Forecasts the Prime rate, the rate at which banks charge interest for their most creditworthy customers.

Table 12: Forecasts the 3 Month LIBOR rate, the rate charged by London banks, used as a benchmark rate worldwide.

Table 13: Forecasts the projected change in the Gross Domestic Product (GDP) price deflator and compares to the FY 2016 inflation forecast. The table also forecasts future inflation rates.

Inflation Forecast

BPA inflation assumptions reflect projected changes in the U.S. GDP Price Deflator. The GDP Price Deflator is the broadest measure of inflation in the U.S. economy. GDP reflects the value of all goods and services produced by domestic and foreign capital and labor within the United States. Major components of GDP include: total consumption, investment, government purchases, and net exports. The real GDP calculations reflect both the changing mix of the components in GDP and the relative price changes in these components.

This index assumes a base year of 2009. The projected change in the GDP price deflator and comparison with the FY 2016 inflation forecast is summarized in Table 13. Column A shows the projected trend in GDP inflation rates between 2017-2046 on a calendar year basis and in column B by BPA fiscal year. Column C provides the cumulative price index projections. The forecast expresses fiscal year dollar values as mid-year dollar values.

If you have questions, or suggestions concerning the FY 2017 Interest Rate and Inflation Forecasts, please contact Bill Hendricks at (503) 230-5389.

A handwritten signature in black ink, appearing to read 'Bill Hendricks', with a long horizontal stroke extending to the right.

Bill Hendricks
Financial Analyst, Debt and Investment Management
Attachment

cc:
See Front List
Official File –
[http://internal.bpa.gov/finance/FT/FTC/Common%20Agency%20Assumptions/Forms/
AllItems.aspx](http://internal.bpa.gov/finance/FT/FTC/Common%20Agency%20Assumptions/Forms/AllItems.aspx)

Table 1
30 Year Treasury Yields and BPA Borrowing Rates
 FY 2017 Forecast of BPA Borrowing Rates

Calendar/Fiscal Years 2017-2046

<u>Year</u>	<u>A</u> Appropriation Rate 1/ Calendar Year	<u>B</u> Appropriation Rate 2/ Fiscal Year	<u>C</u> BPA Rate 3/ No Premium Fiscal Year	<u>D</u> BPA Rate 4/ Coupon Scale-Down Fiscal Year	<u>E</u> BPA Rate 5/ Callable at Par Fiscal Year
2016	3.45				
2017	2.94	2.38	2.93	3.92	4.09
2018	3.44	3.32	3.87	5.00	5.17
2019	4.01	3.87	4.43	5.69	5.86
2020	4.22	4.17	4.74	5.89	6.10
2021	4.22	4.22	4.79	5.94	6.16
2022	4.22	4.22	4.79	5.94	6.16
2023	4.22	4.22	4.79	5.94	6.16
2024	4.22	4.22	4.79	5.94	6.16
2025	4.22	4.22	4.79	5.94	6.16
2026	4.22	4.22	4.79	5.94	6.16
2027	4.22	4.22	4.79	5.94	6.16
2028	4.22	4.22	4.79	5.94	6.16
2029	4.22	4.22	4.79	5.94	6.16
2030	4.22	4.22	4.79	5.94	6.16
2031	4.22	4.22	4.79	5.94	6.16
2032	4.22	4.22	4.79	5.94	6.16
2033	4.22	4.22	4.79	5.94	6.16
2034	4.22	4.22	4.79	5.94	6.16
2035	4.22	4.22	4.79	5.94	6.16
2036	4.22	4.22	4.79	5.94	6.16
2037	4.22	4.22	4.79	5.94	6.16
2038	4.22	4.22	4.79	5.94	6.16
2039	4.22	4.22	4.79	5.94	6.16
2040	4.22	4.22	4.79	5.94	6.16
2041	4.22	4.22	4.79	5.94	6.16
2042	4.22	4.22	4.79	5.94	6.16
2043	4.22	4.22	4.79	5.94	6.16
2044	4.22	4.22	4.79	5.94	6.16
2045	4.22	4.22	4.79	5.94	6.16
2046	4.22	4.22	4.79	5.94	6.16

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ FY 2017 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

3/ Column C = Column B + U.S. Treasury borrowing markup, no premium.

4/ Column D = Column B + U.S. Treasury borrowing markup + Coupon Scale-Down premium.

5/ Column E = Column B + U.S. Treasury borrowing markup + Callable at Par premium.

Table 2
Forecast Comparison - 30 Year BPA Borrowing Rates - Callable at Par
 BPA FY 2017 vs. BPA FY 2016

Fiscal Years 2017-2046

<u>Year</u>	A FY 2017 Forecast BPA Rate 1/ <u>Callable at Par</u>	B FY 2016 Forecast BPA Rate 2/ <u>Callable at Par</u>	C Difference <u>(A-B)</u>
2017	4.09	5.86	-1.78
2018	5.17	6.11	-0.94
2019	5.86	6.16	-0.30
2020	6.10	6.17	-0.07
2021	6.16	6.17	-0.02
2022	6.16	6.17	-0.02
2023	6.16	6.17	-0.02
2024	6.16	6.17	-0.02
2025	6.16	6.17	-0.02
2026	6.16	6.17	-0.02
2027	6.16	6.17	-0.02
2028	6.16	6.17	-0.02
2029	6.16	6.17	-0.02
2030	6.16	6.17	-0.02
2031	6.16	6.17	-0.02
2032	6.16	6.17	-0.02
2033	6.16	6.17	-0.02
2034	6.16	6.17	-0.02
2035	6.16	6.17	-0.02
2036	6.16	6.17	-0.02
2037	6.16	6.17	-0.02
2038	6.16	6.17	-0.02
2039	6.16	6.17	-0.02
2040	6.16	6.17	-0.02
2041	6.16	6.17	-0.02
2042	6.16	6.17	-0.02
2043	6.16	6.17	-0.02
2044	6.16	6.17	-0.02
2045	6.16	6.17	-0.02
2046	6.16	6.17	-0.02

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ Global Insight: The U.S. Economy: 30 Year Focus, August 2015 Forecast, Base Case.

Table 3
20 Year Treasury Yields and BPA Borrowing Rates
 FY 2017 Forecast of BPA Borrowing Rates

Fiscal Years 2017-2046

<u>Year</u>	<u>A</u> Appropriation Rate 1/ Calendar Year	<u>B</u> Appropriation Rate 2/ Fiscal Year	<u>C</u> BPA Rate 3/ No Premium Fiscal Year	<u>D</u> BPA Rate 4/ Coupon Scale-Down Fiscal Year	<u>E</u> BPA Rate 5/ Callable at Par Fiscal Year
2016	3.12				
2017	2.61	2.00	2.43	3.15	3.30
2018	3.16	3.02	3.46	4.31	4.46
2019	3.78	3.62	4.07	5.06	5.21
2020	4.00	3.94	4.40	5.37	5.57
2021	4.00	4.00	4.45	5.42	5.63
2022	4.00	4.00	4.45	5.42	5.63
2023	4.00	4.00	4.45	5.42	5.63
2024	4.00	4.00	4.45	5.42	5.63
2025	4.00	4.00	4.45	5.42	5.63
2026	4.00	4.00	4.45	5.42	5.63
2027	4.00	4.00	4.45	5.42	5.63
2028	4.00	4.00	4.45	5.42	5.63
2029	4.00	4.00	4.45	5.42	5.63
2030	4.00	4.00	4.45	5.42	5.63
2031	4.00	4.00	4.45	5.42	5.63
2032	4.00	4.00	4.45	5.42	5.63
2033	4.00	4.00	4.45	5.42	5.63
2034	4.00	4.00	4.45	5.42	5.63
2035	4.00	4.00	4.45	5.42	5.63
2036	4.00	4.00	4.45	5.42	5.63
2037	4.00	4.00	4.45	5.42	5.63
2038	4.00	4.00	4.45	5.42	5.63
2039	4.00	4.00	4.45	5.42	5.63
2040	4.00	4.00	4.45	5.42	5.63
2041	4.00	4.00	4.45	5.42	5.63
2042	4.00	4.00	4.45	5.42	5.63
2043	4.00	4.00	4.45	5.42	5.63
2044	4.00	4.00	4.45	5.42	5.63
2045	4.00	4.00	4.45	5.42	5.63
2046	4.00	4.00	4.45	5.42	5.63

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ FY 2017 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

3/ Column C = Column B + U.S. Treasury borrowing markup, no premium.

4/ Column D = Column B + U.S. Treasury borrowing markup + Coupon Scale-Down premium.

5/ Column E = Column B + U.S. Treasury borrowing markup + Callable at Par premium.

Table 4
15 Year Treasury Yields and BPA Borrowing Rates
 FY 2017 Forecast of BPA Borrowing Rates

Fiscal Years 2017-2046

<u>Year</u>	<u>A</u> Appropriation Rate 1/ Calendar Year	<u>B</u> Appropriation Rate 2/ Fiscal Year	<u>C</u> BPA Rate 3/ No Premium Fiscal Year	<u>D</u> BPA Rate 4/ Coupon Scale-Down Fiscal Year	<u>E</u> BPA Rate 5/ Callable at Par Fiscal Year
2016	2.95				
2017	2.44	1.86	2.18	2.77	2.90
2018	3.02	2.87	3.25	3.97	4.11
2019	3.66	3.50	3.89	4.74	4.88
2020	3.89	3.83	4.23	5.11	5.31
2021	3.89	3.89	4.28	5.17	5.36
2022	3.89	3.89	4.28	5.17	5.36
2023	3.89	3.89	4.28	5.17	5.36
2024	3.89	3.89	4.28	5.17	5.36
2025	3.89	3.89	4.28	5.17	5.36
2026	3.89	3.89	4.28	5.17	5.36
2027	3.89	3.89	4.28	5.17	5.36
2028	3.89	3.89	4.28	5.17	5.36
2029	3.89	3.89	4.28	5.17	5.36
2030	3.89	3.89	4.28	5.17	5.36
2031	3.89	3.89	4.28	5.17	5.36
2032	3.89	3.89	4.28	5.17	5.36
2033	3.89	3.89	4.28	5.17	5.36
2034	3.89	3.89	4.28	5.17	5.36
2035	3.89	3.89	4.28	5.17	5.36
2036	3.89	3.89	4.28	5.17	5.36
2037	3.89	3.89	4.28	5.17	5.36
2038	3.89	3.89	4.28	5.17	5.36
2039	3.89	3.89	4.28	5.17	5.36
2040	3.89	3.89	4.28	5.17	5.36
2041	3.89	3.89	4.28	5.17	5.36
2042	3.89	3.89	4.28	5.17	5.36
2043	3.89	3.89	4.28	5.17	5.36
2044	3.89	3.89	4.28	5.17	5.36
2045	3.89	3.89	4.28	5.17	5.36
2046	3.89	3.89	4.28	5.17	5.36

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ FY 2017 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

3/ Column C = Column B + U.S. Treasury borrowing markup, no premium.

4/ Column D = Column B + U.S. Treasury borrowing markup + Coupon Scale-Down premium.

5/ Column E = Column B + U.S. Treasury borrowing markup + Callable at Par premium.

Table 5
BPA FY 2017 Appropriation Borrowing Rates 1/

Fiscal Years 2017-2046
 (continued on next page)

Maturity

<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2017	0.69	0.84	0.97	1.10	1.26	1.40	1.50	1.59	1.63	1.63	1.67	1.75	1.75	1.75	1.86
2018	1.78	1.91	2.04	2.17	2.29	2.38	2.47	2.55	2.64	2.73	2.76	2.79	2.82	2.85	2.87
2019	2.65	2.73	2.82	2.91	3.00	3.08	3.15	3.23	3.30	3.38	3.40	3.43	3.45	3.48	3.50
2020	3.09	3.13	3.22	3.31	3.40	3.47	3.53	3.59	3.66	3.72	3.74	3.76	3.79	3.81	3.83
2021	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2022	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2023	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2024	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2025	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2026	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2027	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2028	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2029	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2030	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2031	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2032	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2033	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2034	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2035	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2036	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2037	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2038	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2039	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2040	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2041	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2042	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2043	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2044	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2045	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89
2046	3.16	3.19	3.28	3.38	3.48	3.54	3.60	3.66	3.72	3.78	3.80	3.82	3.85	3.87	3.89

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ FY 2017 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield Forecasts.

Table 5
BPA FY 2017 Appropriation Borrowing Rates 1/

Fiscal Years 2017-2046

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
1.88	1.88	1.93	2.00	2.00	2.01	2.13	2.13	2.18	2.25	2.25	2.25	2.32	2.38	2.38	2.38	2017
2.90	2.93	2.96	2.99	3.02	3.05	3.08	3.11	3.14	3.17	3.20	3.23	3.26	3.29	3.32	3.32	2018
3.52	3.55	3.57	3.60	3.62	3.65	3.67	3.70	3.72	3.74	3.77	3.79	3.82	3.84	3.87	3.87	2019
3.85	3.88	3.90	3.92	3.94	3.97	3.99	4.01	4.03	4.06	4.08	4.10	4.12	4.15	4.17	4.17	2020
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2021
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2022
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2023
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2024
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2025
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2026
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2027
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2028
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2029
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2030
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2031
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2032
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2033
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2034
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2035
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2036
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2037
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2038
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2039
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2040
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2041
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2042
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2043
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2044
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2045
3.91	3.93	3.96	3.98	4.00	4.02	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.22	2046

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ FY 2017 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield Forecasts.

Table 6
BPA FY 2017 BPA Borrowing Rates - No Premium 1/

Fiscal Years 2017-2046
 (continued on next page)

<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2017	0.75	0.92	1.08	1.24	1.40	1.51	1.61	1.72	1.83	1.93	1.98	2.03	2.08	2.13	2.18
2018	1.85	2.00	2.15	2.29	2.44	2.56	2.68	2.80	2.92	3.04	3.09	3.13	3.17	3.21	3.25
2019	2.72	2.83	2.94	3.05	3.16	3.27	3.38	3.49	3.59	3.70	3.74	3.78	3.81	3.85	3.89
2020	3.16	3.24	3.35	3.46	3.57	3.67	3.76	3.86	3.96	4.06	4.09	4.13	4.16	4.19	4.23
2021	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2022	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2023	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2024	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2025	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2026	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2027	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2028	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2029	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2030	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2031	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2032	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2033	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2034	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2035	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2036	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2037	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2038	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2039	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2040	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2041	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2042	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2043	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2044	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2045	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28
2046	3.23	3.30	3.41	3.53	3.64	3.74	3.83	3.93	4.02	4.12	4.15	4.18	4.22	4.25	4.28

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 6
BPA FY 2017 BPA Borrowing Rates - No Premium 1/

Fiscal Years 2017-2046

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
2.23	2.28	2.33	2.38	2.43	2.48	2.53	2.58	2.63	2.68	2.73	2.78	2.83	2.88	2.93	2.93	2017
3.29	3.33	3.38	3.42	3.46	3.50	3.54	3.58	3.62	3.67	3.71	3.75	3.79	3.83	3.87	3.87	2018
3.92	3.96	3.99	4.03	4.07	4.10	4.14	4.18	4.21	4.25	4.28	4.32	4.36	4.39	4.43	4.43	2019
4.26	4.30	4.33	4.36	4.40	4.43	4.46	4.50	4.53	4.57	4.60	4.63	4.67	4.70	4.74	4.74	2020
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2021
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2022
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2023
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2024
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2025
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2026
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2027
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2028
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2029
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2030
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2031
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2032
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2033
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2034
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2035
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2036
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2037
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2038
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2039
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2040
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2041
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2042
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2043
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2044
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2045
4.32	4.35	4.39	4.42	4.45	4.49	4.52	4.55	4.59	4.62	4.65	4.69	4.72	4.76	4.79	4.79	2046

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 7
BPA FY 2017 BPA Borrowing Rates - Coupon Scale-Down 1/

Fiscal Years 2017-2046
 (continued on next page)

<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2017	0.80	1.01	1.21	1.42	1.63	1.78	1.93	2.08	2.23	2.38	2.46	2.54	2.61	2.69	2.77
2018	1.91	2.12	2.32	2.53	2.73	2.91	3.09	3.27	3.45	3.63	3.70	3.77	3.84	3.90	3.97
2019	2.79	2.97	3.16	3.34	3.52	3.70	3.88	4.06	4.24	4.43	4.49	4.55	4.62	4.68	4.74
2020	3.24	3.40	3.59	3.78	3.97	4.14	4.32	4.50	4.67	4.85	4.90	4.95	5.01	5.06	5.11
2021	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2022	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2023	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2024	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2025	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2026	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2027	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2028	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2029	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2030	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2031	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2032	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2033	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2034	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2035	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2036	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2037	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2038	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2039	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2040	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2041	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2042	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2043	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2044	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2045	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17
2046	3.31	3.46	3.65	3.84	4.04	4.21	4.39	4.56	4.74	4.91	4.96	5.01	5.06	5.12	5.17

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 7
BPA FY 2017 BPA Borrowing Rates - Coupon Scale-Down 1/

Fiscal Years 2017-2046

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
2.84	2.92	3.00	3.07	3.15	3.23	3.30	3.38	3.46	3.53	3.61	3.69	3.76	3.84	3.92	3.92	2017
4.04	4.11	4.18	4.25	4.31	4.38	4.45	4.52	4.59	4.65	4.72	4.79	4.86	4.93	5.00	5.00	2018
4.80	4.87	4.93	4.99	5.06	5.12	5.18	5.25	5.31	5.37	5.44	5.50	5.56	5.62	5.69	5.69	2019
5.16	5.21	5.26	5.32	5.37	5.42	5.47	5.52	5.58	5.63	5.68	5.73	5.78	5.83	5.89	5.89	2020
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2021
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2022
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2023
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2024
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2025
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2026
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2027
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2028
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2029
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2030
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2031
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2032
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2033
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2034
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2035
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2036
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2037
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2038
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2039
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2040
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2041
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2042
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2043
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2044
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2045
5.22	5.27	5.32	5.37	5.42	5.48	5.53	5.58	5.63	5.68	5.73	5.78	5.84	5.89	5.94	5.94	2046

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 8
BPA FY 2017 BPA Borrowing Rates - Callable at Par 1/

Fiscal Years 2017-2046
 (continued on next page)

<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2017	0.81	1.03	1.25	1.47	1.69	1.85	2.02	2.18	2.35	2.51	2.59	2.67	2.75	2.83	2.90
2018	1.92	2.14	2.36	2.58	2.80	2.99	3.18	3.37	3.56	3.76	3.83	3.90	3.97	4.04	4.11
2019	2.81	3.00	3.19	3.39	3.58	3.77	3.97	4.16	4.36	4.55	4.62	4.68	4.75	4.81	4.88
2020	3.26	3.43	3.64	3.85	4.06	4.26	4.45	4.65	4.84	5.04	5.09	5.15	5.20	5.25	5.31
2021	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2022	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2023	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2024	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2025	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2026	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2027	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2028	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2029	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2030	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2031	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2032	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2033	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2034	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2035	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2036	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2037	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2038	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2039	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2040	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2041	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2042	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2043	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2044	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2045	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36
2046	3.33	3.50	3.71	3.92	4.13	4.33	4.52	4.71	4.90	5.10	5.15	5.20	5.26	5.31	5.36

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Table 8
BPA FY 2017 BPA Borrowing Rates - Callable at Par 1/

Fiscal Years 2017-2046

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
2.98	3.06	3.14	3.22	3.30	3.38	3.46	3.54	3.61	3.69	3.77	3.85	3.93	4.01	4.09	4.09	2017
4.18	4.25	4.32	4.39	4.46	4.53	4.60	4.67	4.74	4.82	4.89	4.96	5.03	5.10	5.17	5.17	2018
4.94	5.01	5.07	5.14	5.21	5.27	5.34	5.40	5.47	5.53	5.60	5.66	5.73	5.79	5.86	5.86	2019
5.36	5.41	5.47	5.52	5.57	5.63	5.68	5.73	5.78	5.84	5.89	5.94	6.00	6.05	6.10	6.10	2020
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2021
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2022
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2023
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2024
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2025
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2026
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2027
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2028
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2029
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2030
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2031
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2032
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2033
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2034
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2035
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2036
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2037
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2038
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2039
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2040
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2041
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2042
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2043
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2044
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2045
5.42	5.47	5.52	5.57	5.63	5.68	5.73	5.79	5.84	5.89	5.95	6.00	6.05	6.10	6.16	6.16	2046

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 9
BPA FY 2017 Third-Party Taxable Borrowing Rates 1/

Fiscal Years 2017-2046
 (continued on next page)

Maturity

<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2017	1.63	1.90	2.15	2.39	2.64	2.81	2.98	3.16	3.33	3.50	3.56	3.61	3.66	3.72	3.77
2018	2.47	2.64	2.81	2.97	3.14	3.32	3.50	3.68	3.86	4.05	4.10	4.15	4.20	4.25	4.30
2019	3.67	3.77	3.87	3.96	4.05	4.23	4.41	4.59	4.77	4.95	4.99	5.04	5.08	5.13	5.18
2020	4.27	4.32	4.41	4.50	4.59	4.76	4.93	5.10	5.27	5.44	5.48	5.52	5.57	5.61	5.65
2021	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2022	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2023	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2024	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2025	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2026	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2027	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2028	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2029	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2030	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2031	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2032	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2033	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2034	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2035	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2036	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2037	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2038	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2039	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2040	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2041	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2042	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2043	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2044	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2045	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74
2046	4.37	4.40	4.50	4.59	4.69	4.85	5.02	5.19	5.35	5.52	5.57	5.61	5.65	5.70	5.74

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 9
BPA FY 2017 Third-Party Taxable Borrowing Rates 1/

Fiscal Years 2017-2046

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
3.82	3.88	3.93	3.98	4.04	4.09	4.14	4.20	4.25	4.30	4.36	4.41	4.46	4.52	4.57	4.57	2017
4.35	4.40	4.45	4.50	4.56	4.61	4.66	4.71	4.76	4.81	4.86	4.91	4.96	5.01	5.07	5.07	2018
5.22	5.27	5.31	5.36	5.40	5.45	5.50	5.54	5.59	5.63	5.68	5.73	5.77	5.82	5.86	5.86	2019
5.70	5.74	5.78	5.83	5.87	5.92	5.96	6.00	6.05	6.09	6.13	6.18	6.22	6.26	6.31	6.31	2020
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2021
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2022
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2023
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2024
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2025
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2026
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2027
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2028
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2029
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2030
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2031
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2032
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2033
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2034
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2035
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2036
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2037
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2038
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2039
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2040
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2041
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2042
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2043
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2044
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2045
5.78	5.83	5.87	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.34	6.39	6.39	2046

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 10
BPA FY 2017 Third-Party Tax-Exempt Borrowing Rates 1/

Fiscal Years 2017-2046
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<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2017	1.01	1.18	1.33	1.47	1.62	1.78	1.94	2.10	2.26	2.42	2.47	2.52	2.57	2.63	2.68
2018	1.51	1.63	1.72	1.81	1.90	2.08	2.26	2.43	2.61	2.79	2.84	2.89	2.94	2.99	3.04
2019	2.24	2.33	2.38	2.44	2.49	2.68	2.87	3.07	3.26	3.45	3.50	3.55	3.60	3.64	3.69
2020	2.61	2.67	2.72	2.77	2.83	3.02	3.22	3.41	3.60	3.80	3.85	3.90	3.94	3.99	4.04
2021	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2022	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2023	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2024	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2025	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2026	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2027	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2028	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2029	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2030	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2031	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2032	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2033	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2034	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2035	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2036	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2037	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2038	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2039	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2040	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2041	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2042	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2043	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2044	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2045	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10
2046	2.67	2.72	2.78	2.83	2.89	3.08	3.28	3.47	3.66	3.86	3.91	3.96	4.01	4.05	4.10

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 10
BPA FY 2017 Third-Party Tax-Exempt Borrowing Rates 1/

Fiscal Years 2017-2046

<u>Maturity</u>																
<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
2.73	2.79	2.84	2.89	2.94	3.00	3.05	3.10	3.15	3.21	3.26	3.31	3.36	3.42	3.47	3.47	2017
3.09	3.14	3.19	3.24	3.29	3.34	3.39	3.44	3.49	3.55	3.60	3.65	3.70	3.75	3.80	3.80	2018
3.74	3.79	3.84	3.89	3.94	3.99	4.04	4.09	4.14	4.19	4.23	4.28	4.33	4.38	4.43	4.43	2019
4.09	4.14	4.19	4.24	4.29	4.34	4.39	4.43	4.48	4.53	4.58	4.63	4.68	4.73	4.78	4.78	2020
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2021
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2022
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2023
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2024
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2025
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2026
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2027
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2028
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2029
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2030
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2031
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2032
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2033
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2034
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2035
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2036
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2037
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2038
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2039
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2040
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2041
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2042
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2043
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2044
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2045
4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50	4.54	4.59	4.64	4.69	4.74	4.79	4.84	4.84	2046

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 11
BPA FY 2017 FERC Borrowing Rates (Bank Prime) 1/

Calendar/Fiscal Years 2017-2046

<u>Year</u>	<u>A</u> <u>FERC Rate</u> <u>Calendar Year</u>	<u>B</u> <u>FERC Rate</u> <u>Fiscal Year</u>
2017	3.97	4.01
2018	4.72	4.53
2019	5.65	5.42
2020	6.00	5.91
2021	6.00	6.00
2022	6.00	6.00
2023	6.00	6.00
2024	6.00	6.00
2025	6.00	6.00
2026	6.00	6.00
2027	6.00	6.00
2028	6.00	6.00
2029	6.00	6.00
2030	6.00	6.00
2031	6.00	6.00
2032	6.00	6.00
2033	6.00	6.00
2034	6.00	6.00
2035	6.00	6.00
2036	6.00	6.00
2037	6.00	6.00
2038	6.00	6.00
2039	6.00	6.00
2040	6.00	6.00
2041	6.00	6.00
2042	6.00	6.00
2043	6.00	6.00
2044	6.00	6.00
2045	6.00	6.00
2046	6.00	6.00

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

Table 12
BPA FY 2017 May 3 Month LIBOR Rates 1/

Calendar/Fiscal Years 2017-2046

<u>Year</u>	A 3-Mo LIBOR <u>Calendar Year</u>	B 3-Mo LIBOR <u>Fiscal Year</u>
2017	1.20	1.25
2018	2.02	1.81
2019	2.97	2.73
2020	3.29	3.21
2021	3.29	3.29
2022	3.29	3.29
2023	3.29	3.29
2024	3.29	3.29
2025	3.29	3.29
2026	3.29	3.29
2027	3.29	3.29
2028	3.29	3.29
2029	3.29	3.29
2030	3.29	3.29
2031	3.29	3.29
2032	3.29	3.29
2033	3.29	3.29
2034	3.29	3.29
2035	3.29	3.29
2036	3.29	3.29
2037	3.29	3.29
2038	3.29	3.29
2039	3.29	3.29
2040	3.29	3.29
2041	3.29	3.29
2042	3.29	3.29
2043	3.29	3.29
2044	3.29	3.29
2045	3.29	3.29
2046	3.29	3.29

1/ Global Insight: The U.S. Economy: 30 Year Focus,
 August 2016 Forecast, Base Case.

Table 13
Comparison of FY 2017 Inflation Forecast Components
 Calendar/Fiscal Year Forecasts 2017 vs. 2016

Calendar/Fiscal Years 2017-2046

<u>YEAR</u>	A CY 2017 1/ Calendar Year GDP Price <u>Deflator</u> (%)	B FY 2017 1/ Fiscal Year GDP Price <u>Deflator</u> (%)	C FY 2016 2/ Fiscal Year Cumulative <u>Price Deflator</u> (Base Year 2016)	D FY 2016 3/ Fiscal Year GDP Price <u>Deflator</u> (%)	E FY 2016 3/ Fiscal Year Cumulative <u>Price Deflator</u> (Base Year 2015)	F Change in the GDP Price <u>Deflator</u> (B-D)	G Change in the Cumulative <u>Price Deflator</u> (C-E)
2017	2.15%	1.97%	1.010	1.81%	1.026	0.16%	-0.016
2018	2.08%	2.10%	1.031	1.84%	1.045	0.26%	-0.014
2019	2.06%	2.07%	1.052	1.90%	1.065	0.17%	-0.012
2020	2.11%	2.10%	1.074	1.97%	1.086	0.14%	-0.011
2021	2.11%	2.11%	1.097	2.04%	1.108	0.07%	-0.011
2022	2.05%	2.07%	1.120	2.11%	1.131	-0.04%	-0.011
2023	2.02%	2.03%	1.143	2.12%	1.155	-0.09%	-0.013
2024	2.00%	2.00%	1.165	2.10%	1.179	-0.09%	-0.014
2025	2.01%	2.01%	1.189	2.10%	1.204	-0.09%	-0.015
2026	2.00%	2.00%	1.213	2.12%	1.230	-0.12%	-0.017
2027	2.04%	2.03%	1.237	2.14%	1.256	-0.11%	-0.019
2028	2.00%	2.01%	1.262	2.14%	1.283	-0.12%	-0.021
2029	2.02%	2.02%	1.288	2.15%	1.310	-0.13%	-0.023
2030	2.06%	2.05%	1.314	2.16%	1.339	-0.11%	-0.025
2031	2.10%	2.09%	1.342	2.22%	1.368	-0.12%	-0.027
2032	2.11%	2.11%	1.370	2.23%	1.399	-0.12%	-0.029
2033	2.12%	2.11%	1.399	2.23%	1.430	-0.12%	-0.031
2034	2.11%	2.11%	1.428	2.25%	1.462	-0.13%	-0.034
2035	2.10%	2.11%	1.458	2.23%	1.495	-0.12%	-0.036
2036	2.11%	2.11%	1.489	2.22%	1.528	-0.12%	-0.039
2037	2.10%	2.10%	1.520	2.23%	1.562	-0.13%	-0.042
2038	2.11%	2.11%	1.553	2.25%	1.597	-0.14%	-0.045
2039	2.12%	2.11%	1.585	2.27%	1.633	-0.15%	-0.048
2040	2.11%	2.11%	1.619	2.28%	1.671	-0.16%	-0.052
2041	2.13%	2.12%	1.653	2.30%	1.709	-0.17%	-0.056
2042	2.13%	2.13%	1.688	2.32%	1.749	-0.19%	-0.060
2043	2.13%	2.13%	1.724	2.34%	1.789	-0.21%	-0.065
2044	2.13%	2.13%	1.761	2.36%	1.832	-0.23%	-0.070
2045	2.12%	2.12%	1.799	2.37%	1.875	-0.25%	-0.076
2046	2.12%	2.12%	1.837				

1/ Global Insight: The U.S. Economy: 30 Year Focus, August 2016 Forecast, Base Case.

2/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2017, is determined as follows: $1.010 = ((1.97/100) * 5) + 1$. An example of subsequent year cumulative growth, such as in 2018, is found as: $1.031 = (1 + (2.10/100)) * 1.010$

3/ Global Insight: The U.S. Economy: 30 Year Focus, August 2015 Forecast, Base Case.

7. PROJECTED BONDS ISSUED TO TREASURY

7.1 Introduction

This chapter documents all the bonds that BPA has issued and those it projects it will issue to the U.S. Treasury to finance BPA capital investments and Reclamation/Corps investments that will be direct-funded by BPA.

7.2 Issuing Bonds

BPA primarily funds capital outlays by issuing new long-term debt in the form of bonds issued to the U.S. Treasury. BPA issues four types of bonds for Power Services: Construction, Conservation Fish and Wildlife/Environment, and Reclamation/Corps direct-funded. Construction bonds included in the generation study are the portions of bonds that fund furniture, information technology (IT) hardware and software for PS. (Construction bonds are also issued to fund capital expenditures of the transmission function including IT hardware and software and furniture.) Conservation bonds, which will no longer be issued after the conclusion of FY 2015, are used to fund investments in energy efficiency projects. Fish and Wildlife bonds are issued to fund the capital portion of BPA's Fish and Wildlife program. Environment bonds are issued to fund work done by the Transmission Business Line and are not included in the generation repayment study. BPA also issues bonds to fund Reclamation/Corps generation efficiency and reliability improvements. All bonds projected for issuance have been entered into the generation repayment study.

BPA no longer issues conservation bonds to fund the capital portion of BPA's conservation program. Instead, the program is treated as a current year expense.

Reclamation/Corps direct funding bonds have a maximum maturity of 30 years although they may be issued for shorter durations or refinanced up to a maximum maturity of 45 years. Construction bonds are given a maximum repayment period of 6 years. Conservation bonds, issued through FY 2015, have a maximum maturity of 12 years. Fish and Wildlife bonds have a maximum maturity of 15 years.

New bonds are based on projected BPA and Reclamation/Corps capital program outlays. Maturities reflect decisions about debt placement. The assignment practices for interest rates are discussed in Chapter 2 of the Study. The interest rates used are in Chapter 6 of this document.

Table 7A

**BPA Projected Generation Federal Borrowing
FY 2017 - 2019
(\$000s)**

	A	B	C	D	
		Interest		Total	
FY	Description	Rate	Term	Borrowing	
1	2017	Bureau of Reclamation	2.18%	15	13,000
2		Bureau of Reclamation	2.18%	15	13,000
3		Bureau of Reclamation	2.18%	15	14,000
4		Corps of Engineers	2.18%	15	26,796
5		Corps of Engineers	2.18%	15	26,796
6		Corps of Engineers	2.18%	15	27,796
7		Fish and Wildlife	2.18%	15	40,000
8		Power Agency Services	1.51%	5.999	3,150
9		Technology	1.40%	4.999	8,000
10		TOTAL			172,539
11					
12	2018	Bureau of Reclamation	3.25%	15	28,000
13		Bureau of Reclamation	3.29%	16	28,000
14		Bureau of Reclamation	3.33%	17	29,000
15		Corps of Engineers	3.25%	15	53,000
16		Corps of Engineers	3.29%	16	53,000
17		Corps of Engineers	3.33%	17	53,000
18		Fish and Wildlife	3.25%	15	51,000
19		Power Agency Services	2.56%	6.001	5,600
20		Technology	2.44%	4.999	5,000
21		TOTAL			305,600
22					
23	2019	Bureau of Reclamation	3.96%	17	47,000
24		Bureau of Reclamation	3.99%	18	48,000
25		Bureau of Reclamation	4.03%	19	48,000
26		Corps of Engineers	3.96%	17	40,000
27		Corps of Engineers	3.99%	18	41,000
28		Corps of Engineers	4.03%	19	41,000
29		Fish and Wildlife	3.89%	15	44,000
30		Power Agency Services	3.27%	6.001	5,950
31		Technology	3.16%	5	5,000
32		TOTAL			319,950

8. CAPITALIZED CONTRACTS AND OTHER LONG TERM RESOURCE ACQUISITION OBLIGATIONS

8.1 Introduction

This chapter documents the data on third-party debt service or payment costs associated with capitalized contracts and other long-term, fixed contractual obligations. This chapter does not include replacements for the Columbia Generating Station (CGS). This information is included in Chapter 10 of this document.

8.2 Methodology

To determine debt service streams for EN Nuclear Projects WNP-1, CGS, and WNP-3, BPA uses a commercial municipal bond debt management model, DBC Debt Manager. All base debt service streams shown in Tables 8A are based on the amount of non-Federal debt outstanding. The debt service streams reflect all EN refinancings to date and projected CGS capital investments. CGS debt service is displayed net of anticipated revenues expected from the Tennessee Valley Authority for the purchase of nuclear fuel from EN. Debt service streams are derived from such sources as Official Statements, Agency agreements, Agency contracts, and budgetary data.

Table 8A
Capitalized Contracts
(\$000s)

	A	B	C	D	E	F	G	H	I	J	K	L	M
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1 WNP-1	60,431	40,738	40,572	39,322	39,322	39,322	98,564	267,082	228,508	190,536	130,251	-	-
2 CGS	369,867	531,980	464,454	455,106	432,434	383,703	314,731	91,786	96,263	107,707	150,092	214,422	346,710
3 CGS Adjustments	(4,067)	(4,067)	(4,015)	(3,803)	(3,577)	(3,230)	(2,041)	-	-	-	-	-	-
4 CGS Expenses	(2,813)	179	176	175	173	172	128	-	-	-	-	-	-
5 TVA Revenue Offset	(178,250)	(189,500)	(72,500)	(81,000)	(49,500)								
6 CGS Total	184,737	338,592	388,115	370,478	379,530	380,645	312,818	91,786	96,263	107,707	150,092	214,422	346,710
7 WNP-3	236,158	32,139	31,476	40,911	63,733	39,131	57,226	142,920	153,105	192,381	242,334	-	-
8 Wasco	1,934	1,932	1,937	1,948	1,950	1,947	1,947	331	-	-	-	-	-
9 Cowlitz	7,302	7,304	7,301	7,300	7,299	7,303	7,301	7,302	7,300	7,304	7,299	7,299	7,304
10 Total	490,562	420,704	469,402	459,959	491,835	468,348	477,856	509,421	485,176	497,927	529,976	221,722	354,014

9. IRRIGATION ASSISTANCE

9.1 Introduction

This chapter documents the irrigation construction costs for Federal reclamation projects in the Pacific Northwest that the FCRPS has an obligation to repay. These payments, known as irrigation assistance, have been included in the repayment study.

9.2 Background

In an effort to encourage settlement of the arid and semiarid lands of the Western United States, the 1902 Reclamation Act created the Reclamation to develop water resources for irrigation. The 1902 Reclamation Act provided that irrigators using the reclamation projects had 10 years to repay the construction costs of such projects. Title to the reclamation projects, however, remained with the Federal government even after all construction costs were repaid.

By the 1920s, a 10-year repayment period for irrigators was determined to be economically unrealistic. After several leniency acts and extensions, Congress passed the 1939 Reclamation Act, which changed the repayment period on reclamation projects to 40 years after a 10-year development period. Later revisions and project-specific legislation extended repayment periods for most reclamation projects to 50 years after a 10-year development period. However, the Kennewick project has a 66-year repayment period.

Originally, irrigators were responsible for repaying all project construction costs without interest. However, hydropower is a by-product of many reclamation projects and not all of the power generated is needed for irrigation works. As early as the Town Sites and Power Development Act (April 16, 1906, ch. 1631, 34 Stat. 116) Congress authorized Reclamation to lease surplus power and use the proceeds to repay part of the costs of the reclamation projects.

The concept of power revenues contributing to the repayment of Reclamation's multipurpose projects evolved to the current policy, in which power revenues are used to repay that portion of the project construction costs allocated to irrigation use that are beyond the irrigators' "ability to repay." Moreover, the costs to be repaid by power revenues, known as irrigation assistance, are to be repaid without interest. Reclamation has the responsibility to make the determination of the amount that is beyond the irrigators' "ability to repay" through a farm budget analysis. The results of this analysis are used to establish the irrigators' repayment responsibility. The irrigators, as an irrigation district, and Reclamation formalize this repayment responsibility in irrigation contracts.

9.3 Irrigation Repayment

In the Pacific Northwest, the Third Powerplant, Grand Coulee Dam legislation, P.L. 89-448, authorized repayment of the irrigation assistance costs from net revenues of the entire FCRPS. There are, however, limitations on the FCRPS's repayment responsibility. These limitations were added in amendment to the Third Powerplant, Grand Coulee Dam legislation, P.L. 89-561, and apply to reclamation projects, including projects not previously receiving similar assistance, which are authorized to receive such assistance, for which construction was authorized after September 7, 1966.

The irrigation assistance for such projects is to be paid only from net revenues of the power system. Net revenues are defined as those revenues over and above the amount needed to recover all costs allocated to power, including the cost of acquiring power by purchase or exchange, and previously authorized irrigation assistance. The construction of such projects shall be scheduled so that the repayment of the irrigation assistance associated with such projects from power revenues will not require an increase in BPA's power rates.

The total of all irrigation assistance to be repaid from power revenues shall not average more than \$30 million per year in any period of 20 consecutive years.

Reclamation provides BPA with the irrigation assistance to be repaid from each reclamation project. The current generation repayment study includes information provided in July 2008. Because irrigation assistance costs are repaid without interest and BPA repays highest interest-bearing investment first, irrigation assistance is generally scheduled to be repaid in the last year of the repayment period for each reclamation project.

**Table 9A
Irrigation Assistance by Project
(\$000s)**

	A	B	C	
	Fiscal Year Due	Project	Amount	Total
1	2017	Columbia Basin	48,617	
2		Greater Wenatchee	1,073	
3		Yakima, Roza	<u>1,078</u>	
4	2017 Total:			50,769
5	2018	Columbia Basin	25,782	
6		Foster Creek	683	
7		Yakima, Roza	<u>770</u>	
8	2018 Total:			27,234
9	2019	Columbia Basin	50,733	
10		Foster Creek	1,114	
11		Michaud Flats	2,081	
12		Michaud-Fort Hall	2,081	
13		Yakima, Roza	<u>564</u>	
14	2019 Total:			56,573
15	2020	Columbia Basin	21,938	
16		Crooked River	<u>2,380</u>	
17	2020 Total:			24,317
18	2021	Columbia Basin	12,660	
19		Yakima, Roza	<u>2,087</u>	
20	2021 Total:			14,747
21	2022	Columbia Basin	15,437	
22		Yakima, Roza	<u>623</u>	
23	2022 Total:			16,060
24	2023	Columbia Basin	9,755	
25		Rogue River	<u>3,091</u>	
26	2023 Total:			12,846
27	2024	Columbia Basin	7,777	
28		Greater Wenatchee	1,961	
29		Yakima, Kennewick	<u>5,379</u>	
30	2024 Total:			15,117
31	2025	Columbia Basin	12,421	
32		Crooked River Ext	<u>1,122</u>	
33	2025 Total:			13,543
34	2026	Columbia Basin	12,883	
35		Greater Wenatchee	930	
36		Whitestone Coulee Unit	3,810	
37		Yakima, Roza	<u>3,133</u>	
38	2026 Total:			20,755
39	2027	Columbia Basin	3,924	
40		Rogue River	<u>2,194</u>	
41	2027 Total:			6,118
42	2028	Columbia Basin	6,983	
43		The Dalles	<u>4,204</u>	
44	2028 Total:			11,186
45	2029	Baker	<u>4,065</u>	

**Table 9A
Irrigation Assistance by Project
(\$000s)**

	A	B	C	
	Fiscal Year Due	Project	Amount	Total
46	2029 Total:			4,065
47	2030	East Greenacres-Rathdrum	<u>1,996</u>	
48	2030 Total:			1,996
49	2031	Columbia Basin	<u>10,524</u>	
50	2031 Total:			10,524
51	2033	Rogue River	<u>4,347</u>	
52	2033 Total:			4,347
53	2035	Columbia Basin	<u>7,761</u>	
54	2035 Total:			7,761
55	2036	Manson Unit	16,163	
56		Tualatin	9,098	
57		Whitestone Coulee Unit	<u>3,660</u>	
58	2036 Total:			28,920
59	2037	Columbia Basin	12,067	
60		East Greenacres-Rathdrum	<u>3,711</u>	
61	2037 Total:			15,778
62	2039	Tualatin	<u>14,181</u>	
63	2039 Total:			14,181
64	2042	Oroville Tonasket	<u>73,659</u>	
65	2042 Total:			73,659
66	2045	Columbia Basin	<u>11,579</u>	
67	2045 Total:			11,579
68				
69	Grand Total:			<u>442,075</u>

Note: Assistance for Lower Teton, \$40,273, is not included in this list, as it was never completed. Therefore the Administrator has no obligation to recover the cost.

10. REPLACEMENTS PROJECTED AFTER THE COST EVALUATION PERIOD

10.1 Introduction

This chapter documents the process used to develop the capital investments necessary to maintain the existing Federal generating projects at their current operating level during the repayment period. This chapter also includes replacement costs for CGS. Replacement forecasts are included in repayment studies as required by RA 6120.2.

10.2 Methodology

The repayment study incorporates a schedule of Federal investment with the replacements that are expected to occur over the repayment period for existing generation projects. This schedule, expressed in mid-year dollars for each repayment study, FY 2018 and 2019, is based on the amount of investment in the generating projects for the Corps and Reclamation through the end of the cost evaluation period.

Replacements are based on data provided by BPA's Federal Hydro Projects group, the organization responsible for managing the capital program that funds Corps and Reclamation powerhouse replacements. They prepare a project-by-project analysis of future funding requirements extending far into the future. The data are adjusted for several factors. First, adjustments are made to remove the effect of gaining efficiencies from replacing old equipment. The BPA Federal Hydro Projects group estimates that 12.5 percent of total costs reflect upgrades for efficiencies. Second, replacements exclude the portion of the budget for "small capital," those investments outside of the powerhouses.

A schedule of replacement investments for CGS is based on the original investment adjusted by the use of the Handy-Whitman indices for a nuclear power plant. The Handy-Whitman Index is widely used in industry for estimating replacement costs for plant. The result of this calculation was converted into a mortgage-style investment with payments sufficient to retire the replacement cost in 37 years.

Table 10A
Corps/Reclamation Replacements (FY 2016)
(\$000s)

	A	B	C	D
	In Service Date	Current Principal	Interest Rate	Due Date
1	2019	219,724	3.870%	2064
2	2020	219,724	3.870%	2065
3	2021	219,724	3.870%	2066
4	2022	219,724	3.870%	2067
5	2023	219,724	3.870%	2068
6	2024	219,724	3.870%	2069
7	2025	219,724	3.870%	2070
8	2026	219,724	3.870%	2071
9	2027	219,724	3.870%	2072
10	2028	219,724	3.870%	2073
11	2029	219,724	3.870%	2074
12	2030	219,724	3.870%	2075
13	2031	219,724	3.870%	2076
14	2032	219,724	3.870%	2077
15	2033	219,724	3.870%	2078
16	2034	219,724	3.870%	2079
17	2035	219,724	3.870%	2080
18	2036	219,724	3.870%	2081
19	2037	219,724	3.870%	2082
20	2038	219,724	3.870%	2083
21	2039	219,724	3.870%	2084
22	2040	219,724	3.870%	2085
23	2041	219,724	3.870%	2086
24	2042	219,724	3.870%	2087
25	2043	219,724	3.870%	2088
26	2044	219,724	3.870%	2089
27	2045	219,724	3.870%	2090
28	2046	219,724	3.870%	2091
29	2047	219,724	3.870%	2092
30	2048	219,724	3.870%	2093
31	2049	219,724	3.870%	2094
32	2050	219,724	3.870%	2095
33	2051	219,724	3.870%	2096
34	2052	219,724	3.870%	2097
35	2053	219,724	3.870%	2098
36	2054	219,724	3.870%	2099
37	2055	219,724	3.870%	2100
38	2056	219,724	3.870%	2101
39	2057	219,724	3.870%	2102
40	2058	219,724	3.870%	2103
41	2059	219,724	3.870%	2104
42	2060	219,724	3.870%	2105
43	2061	219,724	3.870%	2106
44	2062	219,724	3.870%	2107
45	2063	219,724	3.870%	2108
46	2064	219,724	3.870%	2109
47	2065	219,724	3.870%	2110
48	2066	219,724	3.870%	2111
49	2067	219,724	3.870%	2112
50	2068	219,724	3.870%	2113

Table 10B
Corps/Reclamation Replacements (FY 2017)
(\$000s)

	A	B	C	D
	In Service Date	Current Principal	Interest Rate	Due Date
1	2020	218,435	4.430%	2065
2	2021	218,435	4.430%	2066
3	2022	218,435	4.430%	2067
4	2023	218,435	4.430%	2068
5	2024	218,435	4.430%	2069
6	2025	218,435	4.430%	2070
7	2026	218,435	4.430%	2071
8	2027	218,435	4.430%	2072
9	2028	218,435	4.430%	2073
10	2029	218,435	4.430%	2074
11	2030	218,435	4.430%	2075
12	2031	218,435	4.430%	2076
13	2032	218,435	4.430%	2077
14	2033	218,435	4.430%	2078
15	2034	218,435	4.430%	2079
16	2035	218,435	4.430%	2080
17	2036	218,435	4.430%	2081
18	2037	218,435	4.430%	2082
19	2038	218,435	4.430%	2083
20	2039	218,435	4.430%	2084
21	2040	218,435	4.430%	2085
22	2041	218,435	4.430%	2086
23	2042	218,435	4.430%	2087
24	2043	218,435	4.430%	2088
25	2044	218,435	4.430%	2089
26	2045	218,435	4.430%	2090
27	2046	218,435	4.430%	2091
28	2047	218,435	4.430%	2092
29	2048	218,435	4.430%	2093
30	2049	218,435	4.430%	2094
31	2050	218,435	4.430%	2095
32	2051	218,435	4.430%	2096
33	2052	218,435	4.430%	2097
34	2053	218,435	4.430%	2098
35	2054	218,435	4.430%	2099
36	2055	218,435	4.430%	2100
37	2056	218,435	4.430%	2101
38	2057	218,435	4.430%	2102
39	2058	218,435	4.430%	2103
40	2059	218,435	4.430%	2104
41	2060	218,435	4.430%	2105
42	2061	218,435	4.430%	2106
43	2062	218,435	4.430%	2107
44	2063	218,435	4.430%	2108
45	2064	218,435	4.430%	2109
46	2065	218,435	4.430%	2110
47	2066	218,435	4.430%	2111
48	2067	218,435	4.430%	2112
49	2068	218,435	4.430%	2113
50	2069	218,435	4.430%	2114

Table 10C
Columbia Generating Station Replacements
(\$000s)

	A	B
	Fiscal Year	Total Debt Service
1	2045	489,037
2	2046	489,034
3	2047	489,038
4	2048	489,035
5	2049	489,036
6	2050	489,036
7	2051	489,035
8	2052	489,035
9	2053	489,035
10	2054	489,036
11	2055	489,037
12	2056	489,034
13	2057	489,034
14	2058	489,033
15	2059	489,039
16	2060	489,037
17	2061	489,038
18	2062	489,035
19	2063	489,035
20	2064	489,038
21	2065	489,035
22	2066	489,034
23	2067	489,038
24	2068	489,034
25	2069	489,035
26	2070	489,034
27	2071	489,034
28	2072	489,038
29	2073	489,036
30	2074	489,036
31	2075	489,038
32	2076	489,036
33	2077	489,034
34	2078	489,033
35	2079	489,034
36	2080	462,225
37	2081	462,225
38	2082	462,225
39	2083	462,225
40	2084	462,225
41	2085	462,225
42	2086	462,225
43	2087	462,225
44	2088	462,225
45	2089	462,225
46	2090	462,225
47	2091	462,225
48	2092	462,225
49	2093	462,225
50	2094	462,225

11. REPAYMENT STUDY DATA, FY 2018 STUDY

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1	Albeni Falls	09/1955	09/2005	6.910%	25,494	0	
2	Albeni Falls	09/1956	09/2005	6.910%	11	0	
3	Albeni Falls	09/1957	09/2005	6.910%	10	0	
4	Albeni Falls	09/1958	09/2005	6.910%	11	0	
5	Albeni Falls	09/1959	09/2005	6.910%	11	0	
6	Albeni Falls	09/1960	09/2005	6.910%	10	0	
7	Albeni Falls	09/1961	09/2005	6.910%	11	0	
8	Albeni Falls	09/1962	09/2005	6.910%	11	0	
9	Albeni Falls	09/1963	09/2005	6.910%	10	0	
10	Albeni Falls	09/1964	09/2005	6.910%	11	0	
11	Albeni Falls	09/1965	09/2005	6.910%	11	0	
12	Albeni Falls	09/1966	09/2005	6.910%	10	0	
13	Albeni Falls	09/1967	09/2005	6.910%	11	0	
14	Albeni Falls	09/1968	09/2005	6.910%	11	0	
15	Albeni Falls	09/1969	09/2005	6.910%	10	0	
16	Albeni Falls	09/1970	09/2005	6.910%	11	0	
17	Albeni Falls	09/1971	09/2005	6.910%	11	0	
18	Albeni Falls	09/1972	09/2005	6.910%	10	0	
19	Albeni Falls	09/1973	09/2005	6.910%	11	0	
20	Albeni Falls	09/1974	09/2005	6.910%	11	0	
21	Albeni Falls	09/1975	09/2005	6.910%	10	0	
22	Albeni Falls	09/1976	09/2005	6.910%	11	0	
23	Albeni Falls	09/1977	09/2005	6.910%	11	0	
24	Albeni Falls	09/1978	09/2005	6.910%	10	0	
25	Albeni Falls	09/1979	09/2005	6.910%	11	0	
26	Albeni Falls	09/1980	09/2005	6.910%	11	0	
27	Albeni Falls	09/1981	09/2005	6.910%	10	0	
28	Albeni Falls	09/1982	09/2005	6.910%	11	0	
29	Albeni Falls	09/1983	09/2005	6.910%	11	0	
30	Albeni Falls	09/1985	09/2005	6.910%	7	0	
31	Albeni Falls	09/1986	09/2005	6.910%	293	0	
32	Albeni Falls	09/1987	09/2005	6.910%	12	0	
33	Albeni Falls	09/1987	09/2005	8.888%	15	0	
34	Albeni Falls	09/1988	09/2005	8.500%	328	0	
35	Albeni Falls	09/1989	09/2005	9.250%	221	0	
36	Albeni Falls	09/1990	09/2005	8.875%	1,287	0	
37	Albeni Falls	09/1991	09/2005	8.750%	43	0	
38	Albeni Falls	09/1991	09/2005	8.750%	111	0	
39	Albeni Falls	09/1992	09/2005	8.500%	7	0	
40	Albeni Falls	09/1992	09/2005	8.500%	106	0	
41	Albeni Falls	09/1993	09/2005	7.875%	295	0	
42	Albeni Falls	09/1993	09/2005	7.875%	714	0	
43	Albeni Falls	09/1994	09/2019	7.125%	61	0	
44	Albeni Falls	09/1994	09/2019	7.125%	173	0	
45	Albeni Falls	09/1995	09/2010	7.090%	17	0	
46	Albeni Falls	09/1995	09/2010	7.890%	51	0	
47	Albeni Falls	09/1995	09/2045	7.150%	443	443	
48	Albeni Falls	09/1995	09/2045	7.150%	531	531	
49	Albeni Falls	09/1995	09/2045	7.150%	1,105	1,105	
50	Albeni Falls	09/1996	09/2016	7.290%	130	0	
51	Albeni Falls	09/1997	09/2047	7.150%	431	431	
52	Albeni Falls	09/2005	09/2055	5.125%	481	481	
53	Albeni Falls	09/2009	09/2059	4.375%	57	57	
54	Albeni Falls	09/2010	09/2060	4.250%	42	42	
55	Boise	09/1912	09/1962	3.000%	1,249	0	
56	Boise	09/1912	09/1962	3.000%	285	0	
57	Boise	09/1926	09/1976	3.000%	190	0	
58	Boise	09/1926	09/1976	3.000%	832	0	
59	Boise	09/1950	09/2000	3.000%	416	0	
60	Boise	09/1950	09/2000	3.000%	95	0	
61	Boise	09/1951	09/2001	3.000%	1,873	0	
62	Boise	09/1951	09/2001	3.000%	428	0	
63	Boise	09/1952	09/2001	3.000%	11	0	
64	Boise	09/1952	09/2001	3.000%	3	0	
65	Boise	09/1953	09/2001	3.000%	11	0	
66	Boise	09/1953	09/2001	3.000%	3	0	
67	Boise	09/1954	09/2001	3.000%	11	0	
68	Boise	09/1954	09/2001	3.000%	3	0	
69	Boise	09/1955	09/2001	3.000%	11	0	
70	Boise	09/1955	09/2001	3.000%	3	0	
71	Boise	09/1956	09/2001	3.000%	11	0	
72	Boise	09/1956	09/2001	3.000%	3	0	
73	Boise	09/1957	09/2001	3.000%	11	0	
74	Boise	09/1957	09/2001	3.000%	3	0	
75	Boise	09/1958	09/2001	3.000%	11	0	
76	Boise	09/1958	09/2001	3.000%	3	0	
77	Boise	09/1959	09/2001	3.000%	11	0	
78	Boise	09/1959	09/2001	3.000%	3	0	
79	Boise	09/1960	09/2001	3.000%	11	0	
80	Boise	09/1960	09/2001	3.000%	3	0	
81	Boise	09/1961	09/2001	3.000%	11	0	
82	Boise	09/1961	09/2001	3.000%	3	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
83	Boise	09/1962	09/2001	3.000%	11	0	
84	Boise	09/1962	09/2001	3.000%	3	0	
85	Boise	09/1963	09/2001	3.000%	11	0	
86	Boise	09/1963	09/2001	3.000%	3	0	
87	Boise	09/1964	09/2001	3.000%	11	0	
88	Boise	09/1964	09/2001	3.000%	3	0	
89	Boise	09/1965	09/2001	3.000%	11	0	
90	Boise	09/1965	09/2001	3.000%	3	0	
91	Boise	09/1966	09/2001	3.000%	11	0	
92	Boise	09/1966	09/2001	3.000%	3	0	
93	Boise	09/1967	09/2001	3.000%	11	0	
94	Boise	09/1967	09/2001	3.000%	3	0	
95	Boise	09/1968	09/2001	3.000%	11	0	
96	Boise	09/1968	09/2001	3.000%	3	0	
97	Boise	09/1969	09/2001	3.000%	11	0	
98	Boise	09/1969	09/2001	3.000%	3	0	
99	Boise	09/1970	09/2001	3.000%	11	0	
100	Boise	09/1970	09/2001	3.000%	3	0	
101	Boise	09/1971	09/2001	3.000%	11	0	
102	Boise	09/1971	09/2001	3.000%	3	0	
103	Boise	09/1972	09/2001	3.000%	11	0	
104	Boise	09/1972	09/2001	3.000%	3	0	
105	Boise	09/1973	09/2001	3.000%	11	0	
106	Boise	09/1973	09/2001	3.000%	3	0	
107	Boise	09/1974	09/2001	3.000%	11	0	
108	Boise	09/1974	09/2001	3.000%	3	0	
109	Boise	09/1975	09/2001	3.000%	11	0	
110	Boise	09/1975	09/2001	3.000%	3	0	
111	Boise	09/1976	09/2001	3.000%	11	0	
112	Boise	09/1976	09/2001	3.000%	3	0	
113	Boise	09/1977	09/2001	3.000%	11	0	
114	Boise	09/1977	09/2001	3.000%	3	0	
115	Boise	09/1978	09/2001	3.000%	11	0	
116	Boise	09/1978	09/2001	3.000%	3	0	
117	Boise	09/1979	09/2001	3.000%	11	0	
118	Boise	09/1979	09/2001	3.000%	3	0	
119	Boise	09/1980	09/2001	3.000%	18	0	
120	Boise	09/1980	09/2001	3.000%	4	0	
121	Boise	09/1981	09/2001	3.000%	8	0	
122	Boise	09/1981	09/2001	3.000%	2	0	
123	Boise	09/1982	09/2001	3.000%	1	0	
124	Boise	09/1982	09/2001	3.000%	1	0	
125	Boise	09/1983	09/2001	3.000%	1	0	
126	Boise	09/1984	09/2001	10.750%	1,325	0	
127	Boise	09/1984	09/2001	10.750%	303	0	
128	Boise	09/1986	09/2001	6.710%	94	0	
129	Boise	09/1988	09/2001	8.500%	3	0	
130	Boise	09/1989	09/2001	9.250%	3,264	0	
131	Boise	09/1990	09/2001	8.875%	38	0	
132	Boise	09/1991	09/2001	8.750%	50	0	
133	Boise	09/1993	09/2001	7.875%	418	0	
134	Boise	09/1994	09/1999	7.125%	7	0	
135	Boise	09/1996	09/2046	6.950%	7	0	
136	Boise	09/1996	09/2046	7.150%	442	442	
137	Boise	09/1996	09/2046	7.150%	656	656	
138	Boise	09/1997	09/2047	6.950%	9	0	
139	Boise	09/1997	09/2047	7.150%	2,266	2,266	
140	Boise	09/2005	09/2055	5.125%	903	903	
141	Boise	09/2006	09/2056	4.500%	15	15	
142	Boise	09/2007	09/2057	5.000%	76	76	
143	Boise	09/2008	09/2058	4.875%	64	64	
144	Boise	09/2009	09/2059	4.375%	2	2	
145	Boise	09/2015	09/2065	3.250%	0	0	
146	Bonneville 2nd Powerhouse	09/1981	09/2031	7.150%	40,964	0	
147	Bonneville 2nd Powerhouse	09/1981	09/2031	7.150%	455	0	
148	Bonneville 2nd Powerhouse	09/1982	09/2032	7.150%	203,535	0	
149	Bonneville 2nd Powerhouse	09/1982	09/2032	7.150%	2,264	0	
150	Bonneville 2nd Powerhouse	09/1983	09/2033	7.150%	62,409	0	
151	Bonneville 2nd Powerhouse	09/1983	09/2033	7.150%	694	0	
152	Bonneville 2nd Powerhouse	09/1985	09/2033	7.150%	9,138	0	
153	Bonneville 2nd Powerhouse	09/1986	09/2033	7.150%	30,578	21,534	
154	Bonneville 2nd Powerhouse	09/1987	09/2033	7.150%	2,801	2,801	
155	Bonneville 2nd Powerhouse	09/1988	09/2033	7.150%	1,271	1,271	
156	Bonneville 2nd Powerhouse	09/1989	09/2033	7.150%	1,232	1,232	
157	Bonneville 2nd Powerhouse	09/1990	09/2033	7.150%	1,588	1,588	
158	Bonneville 2nd Powerhouse	09/1991	09/2033	8.750%	3,998	0	
159	Bonneville 2nd Powerhouse	09/1991	09/2033	8.750%	26	0	
160	Bonneville 2nd Powerhouse	09/1992	09/2033	8.500%	2,446	0	
161	Bonneville 2nd Powerhouse	09/1993	09/2033	7.875%	3,668	0	
162	Bonneville 2nd Powerhouse	09/1994	09/2044	7.150%	5,700	5,700	
163	Bonneville 2nd Powerhouse	09/1995	09/2045	7.150%	3,791	3,791	
164	Bonneville 2nd Powerhouse	09/1996	09/2046	7.150%	376	376	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
165	Bonneville Dam	09/1938	09/1988	2.500%	11,726	0	
166	Bonneville Dam	09/1938	09/1988	2.500%	130	0	
167	Bonneville Dam	09/1941	09/1991	2.500%	17,589	0	
168	Bonneville Dam	09/1941	09/1991	2.500%	196	0	
169	Bonneville Dam	09/1942	09/1992	2.500%	5,863	0	
170	Bonneville Dam	09/1942	09/1992	2.500%	65	0	
171	Bonneville Dam	09/1943	09/1993	2.500%	17,589	0	
172	Bonneville Dam	09/1943	09/1993	2.500%	196	0	
173	Bonneville Dam	09/1944	09/1994	2.500%	5,860	0	
174	Bonneville Dam	09/1944	09/1994	2.500%	65	0	
175	Bonneville Dam	09/1945	09/1994	2.500%	82	0	
176	Bonneville Dam	09/1945	09/1994	2.500%	1	0	
177	Bonneville Dam	09/1946	09/1994	2.500%	81	0	
178	Bonneville Dam	09/1946	09/1994	2.500%	1	0	
179	Bonneville Dam	09/1947	09/1994	2.500%	82	0	
180	Bonneville Dam	09/1947	09/1994	2.500%	1	0	
181	Bonneville Dam	09/1948	09/1994	2.500%	81	0	
182	Bonneville Dam	09/1948	09/1994	2.500%	1	0	
183	Bonneville Dam	09/1949	09/1994	2.500%	82	0	
184	Bonneville Dam	09/1949	09/1994	2.500%	1	0	
185	Bonneville Dam	09/1950	09/1994	2.500%	81	0	
186	Bonneville Dam	09/1950	09/1994	2.500%	11	0	
187	Bonneville Dam	09/1951	09/1994	2.500%	81	0	
188	Bonneville Dam	09/1951	09/1994	2.500%	11	0	
189	Bonneville Dam	09/1952	09/1994	2.500%	82	0	
190	Bonneville Dam	09/1952	09/1994	2.500%	1	0	
191	Bonneville Dam	09/1953	09/1994	2.500%	81	0	
192	Bonneville Dam	09/1953	09/1994	2.500%	1	0	
193	Bonneville Dam	09/1954	09/1994	2.500%	82	0	
194	Bonneville Dam	09/1954	09/1994	2.500%	1	0	
195	Bonneville Dam	09/1955	09/1994	2.500%	81	0	
196	Bonneville Dam	09/1955	09/1994	2.500%	1	0	
197	Bonneville Dam	09/1956	09/1994	2.500%	81	0	
198	Bonneville Dam	09/1956	09/1994	2.500%	1	0	
199	Bonneville Dam	09/1957	09/1994	2.500%	82	0	
200	Bonneville Dam	09/1957	09/1994	2.500%	1	0	
201	Bonneville Dam	09/1958	09/1994	2.500%	81	0	
202	Bonneville Dam	09/1958	09/1994	2.500%	1	0	
203	Bonneville Dam	09/1959	09/1994	2.500%	82	0	
204	Bonneville Dam	09/1959	09/1994	2.500%	1	0	
205	Bonneville Dam	09/1960	09/1994	2.500%	81	0	
206	Bonneville Dam	09/1960	09/1994	2.500%	1	0	
207	Bonneville Dam	09/1961	09/1994	2.500%	81	0	
208	Bonneville Dam	09/1961	09/1994	2.500%	1	0	
209	Bonneville Dam	09/1962	09/1994	2.500%	82	0	
210	Bonneville Dam	09/1962	09/1994	2.500%	1	0	
211	Bonneville Dam	09/1963	09/1994	2.500%	81	0	
212	Bonneville Dam	09/1963	09/1994	2.500%	1	0	
213	Bonneville Dam	09/1964	09/1994	2.500%	82	0	
214	Bonneville Dam	09/1964	09/1994	2.500%	1	0	
215	Bonneville Dam	09/1965	09/1994	2.500%	81	0	
216	Bonneville Dam	09/1965	09/1994	2.500%	1	0	
217	Bonneville Dam	09/1966	09/1994	2.500%	81	0	
218	Bonneville Dam	09/1966	09/1994	2.500%	1	0	
219	Bonneville Dam	09/1967	09/1994	2.500%	82	0	
220	Bonneville Dam	09/1967	09/1994	2.500%	1	0	
221	Bonneville Dam	09/1968	09/1994	2.500%	81	0	
222	Bonneville Dam	09/1968	09/1994	2.500%	1	0	
223	Bonneville Dam	09/1969	09/1994	2.500%	82	0	
224	Bonneville Dam	09/1969	09/1994	2.500%	1	0	
225	Bonneville Dam	09/1970	09/1994	2.500%	81	0	
226	Bonneville Dam	09/1970	09/1994	2.500%	1	0	
227	Bonneville Dam	09/1971	09/1994	2.500%	81	0	
228	Bonneville Dam	09/1971	09/1994	2.500%	1	0	
229	Bonneville Dam	09/1972	09/1994	2.500%	82	0	
230	Bonneville Dam	09/1972	09/1994	2.500%	1	0	
231	Bonneville Dam	09/1973	09/1994	2.500%	81	0	
232	Bonneville Dam	09/1973	09/1994	2.500%	1	0	
233	Bonneville Dam	09/1974	09/1994	2.500%	82	0	
234	Bonneville Dam	09/1974	09/1994	2.500%	1	0	
235	Bonneville Dam	09/1975	09/1994	2.500%	81	0	
236	Bonneville Dam	09/1975	09/1994	2.500%	1	0	
237	Bonneville Dam	09/1976	09/1994	2.500%	81	0	
238	Bonneville Dam	09/1976	09/1994	2.500%	1	0	
239	Bonneville Dam	09/1977	09/1994	2.500%	82	0	
240	Bonneville Dam	09/1977	09/1994	2.500%	1	0	
241	Bonneville Dam	09/1977	09/2027	7.150%	15,670	0	
242	Bonneville Dam	09/1978	09/1994	2.500%	81	0	
243	Bonneville Dam	09/1978	09/1994	2.500%	1	0	
244	Bonneville Dam	09/1979	09/1994	2.500%	82	0	
245	Bonneville Dam	09/1979	09/1994	2.500%	1	0	
246	Bonneville Dam	09/1980	09/1994	2.500%	81	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
247	Bonneville Dam	09/1980	09/1994	2.500%	1	0		
248	Bonneville Dam	09/1981	09/1994	2.500%	81	0		
249	Bonneville Dam	09/1981	09/1994	2.500%	1	0		
250	Bonneville Dam	09/1982	09/1994	2.500%	82	0		
251	Bonneville Dam	09/1982	09/1994	2.500%	2	0		
252	Bonneville Dam	09/1983	09/1994	2.500%	81	0		
253	Bonneville Dam	09/1983	09/1994	2.500%	1	0		
254	Bonneville Dam	09/1984	09/1994	10.750%	873	0		
255	Bonneville Dam	09/1984	09/1994	10.750%	10	0		
256	Bonneville Dam	09/1985	09/1994	2.500%	119	0		
257	Bonneville Dam	09/1986	09/1994	2.500%	555	0		
258	Bonneville Dam	09/1986	09/1994	11.375%	454	0		
259	Bonneville Dam	09/1987	09/1994	2.500%	260	0		
260	Bonneville Dam	09/1987	09/1994	8.875%	26	0		
261	Bonneville Dam	09/1988	09/1994	8.500%	4,199	0		
262	Bonneville Dam	09/1988	09/1994	8.500%	10	0		
263	Bonneville Dam	09/1989	09/1994	9.250%	877	0		
264	Bonneville Dam	09/1990	09/1994	8.875%	519	0		
265	Bonneville Dam	09/1990	09/1994	8.875%	651	0		
266	Bonneville Dam	09/1991	09/1994	8.750%	35	0		
267	Bonneville Dam	09/1991	09/1994	8.750%	3,193	0		
268	Bonneville Dam	09/1992	09/1994	8.500%	99	0		
269	Bonneville Dam	09/1992	09/1994	8.500%	25	0		
270	Bonneville Dam	09/1993	09/2018	7.880%	5,011	0		
271	Bonneville Dam	09/1994	09/2029	7.125%	536	0		
272	Bonneville Dam	09/1995	09/2000	7.330%	8	0		
273	Bonneville Dam	09/1995	09/2010	7.090%	25	0		
274	Bonneville Dam	09/1995	09/2020	7.250%	20	0		
275	Bonneville Dam	09/1995	09/2020	7.250%	22	0		
276	Bonneville Dam	09/1995	09/2030	7.860%	53	0		
277	Bonneville Dam	09/1995	09/2035	7.860%	98	0		
278	Bonneville Dam	09/1995	09/2045	7.150%	243	243		
279	Bonneville Dam	09/1995	09/2045	7.150%	410	410		
280	Bonneville Dam	09/1995	09/2045	7.150%	440	440		
281	Bonneville Dam	09/1995	09/2045	7.860%	374	0		
282	Bonneville Dam	09/1996	09/2016	7.290%	834	0		
283	Bonneville Dam	09/1996	09/2031	7.150%	22	0		
284	Bonneville Dam	09/1996	09/2046	7.150%	18	18		
285	Bonneville Dam	09/1996	09/2046	7.150%	18	18		
286	Bonneville Dam	09/1996	09/2046	7.150%	80	80		
287	Bonneville Dam	09/1996	09/2046	7.150%	109	109		
288	Bonneville Dam	09/1996	09/2046	7.150%	142	142		
289	Bonneville Dam	09/1996	09/2046	7.150%	223	223		
290	Bonneville Dam	09/1996	09/2046	7.150%	751	751		
291	Bonneville Dam	09/1996	09/2046	7.150%	1,322	1,322		
292	Bonneville Dam	09/1997	09/2022	7.230%	122	0		
293	Bonneville Dam	09/1997	09/2032	7.150%	518	0		
294	Bonneville Dam	09/1997	09/2047	7.150%	161	161		
295	Bonneville Dam	09/1999	09/2049	5.375%	19,368	19,368		
296	Bonneville Dam	09/2000	09/2050	6.125%	24,446	24,446		
297	Bonneville Dam	09/2001	09/2051	5.875%	2,530	2,530		
298	Bonneville Dam	09/2002	09/2052	5.500%	448	448		
299	Bonneville Dam	09/2003	09/2053	5.125%	4,581	4,581		
300	Bonneville Dam	09/2004	09/2054	5.375%	26,741	26,741		
301	Bonneville Dam	09/2005	09/2055	5.125%	19,725	19,725		
302	Bonneville Dam	09/2006	09/2056	4.500%	2,628	2,628		
303	Bonneville Dam	09/2007	09/2057	5.000%	1,124	1,124		
304	Bonneville Dam	09/2008	09/2058	4.875%	14,609	14,609		
305	Bonneville Dam	09/2009	09/2059	4.375%	2,744	2,744		
306	Bonneville Dam	09/2010	09/2060	4.250%	1,425	1,425		
307	Bonneville Dam	09/2011	09/2061	3.750%	10,962	10,962		
308	Bonneville Dam	09/2013	09/2063	2.875%	268	268		
309	Bonneville Dam	09/2014	09/2064	3.875%				
310	Bonneville Dam	09/2015	09/2065	3.250%	102	102		
311	Chief Joseph	09/1955	09/2005	6.910%	29,164	0		
312	Chief Joseph	09/1956	09/2006	6.950%	13,643	0		
313	Chief Joseph	09/1957	09/2007	6.980%	39,586	0		
314	Chief Joseph	09/1958	09/2008	7.020%	31,901	0		
315	Chief Joseph	09/1959	09/2008	7.020%	223	0		
316	Chief Joseph	09/1960	09/2008	7.020%	223	0		
317	Chief Joseph	09/1961	09/2008	7.020%	223	0		
318	Chief Joseph	09/1962	09/2008	7.020%	223	0		
319	Chief Joseph	09/1963	09/2008	7.020%	224	0		
320	Chief Joseph	09/1964	09/2008	7.020%	223	0		
321	Chief Joseph	09/1965	09/2008	7.020%	223	0		
322	Chief Joseph	09/1966	09/2008	7.020%	223	0		
323	Chief Joseph	09/1967	09/2008	7.020%	223	0		
324	Chief Joseph	09/1968	09/2008	7.020%	224	0		
325	Chief Joseph	09/1969	09/2008	7.020%	223	0		
326	Chief Joseph	09/1970	09/2008	7.020%	223	0		
327	Chief Joseph	09/1971	09/2008	7.020%	223	0		
328	Chief Joseph	09/1972	09/2008	7.020%	223	0		

**TABLE 11A:
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(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
329	Chief Joseph	09/1973	09/2008	7.020%	224	0	
330	Chief Joseph	09/1974	09/2008	7.020%	223	0	
331	Chief Joseph	09/1975	09/2008	7.020%	223	0	
332	Chief Joseph	09/1976	09/2008	7.020%	223	0	
333	Chief Joseph	09/1977	09/2008	7.020%	223	0	
334	Chief Joseph	09/1977	09/2027	7.150%	30,512	0	
335	Chief Joseph	09/1978	09/2008	7.020%	224	0	
336	Chief Joseph	09/1978	09/2028	7.150%	75,669	0	
337	Chief Joseph	09/1979	09/2008	7.020%	223	0	
338	Chief Joseph	09/1979	09/2029	7.150%	60,079	0	
339	Chief Joseph	09/1980	09/2008	7.020%	223	0	
340	Chief Joseph	09/1981	09/2008	7.020%	223	0	
341	Chief Joseph	09/1982	09/2008	7.020%	223	0	
342	Chief Joseph	09/1983	09/2008	7.020%	224	0	
343	Chief Joseph	09/1984	09/2008	10.750%	909	0	
344	Chief Joseph	09/1985	09/2008	7.020%	46	0	
345	Chief Joseph	09/1985	09/2029	7.150%	16,372	0	
346	Chief Joseph	09/1986	09/2029	7.150%	5,363	0	
347	Chief Joseph	09/1987	09/2008	8.875%	104	0	
348	Chief Joseph	09/1987	09/2029	7.150%	3,036	0	
349	Chief Joseph	09/1988	09/2029	7.150%	2,722	0	
350	Chief Joseph	09/1989	09/2008	9.250%	327	0	
351	Chief Joseph	09/1989	09/2029	7.150%	2,227	0	
352	Chief Joseph	09/1990	09/2008	8.875%	1,024	0	
353	Chief Joseph	09/1990	09/2029	7.150%	4,505	0	
354	Chief Joseph	09/1991	09/2008	8.750%	34	0	
355	Chief Joseph	09/1991	09/2008	8.750%	293	0	
356	Chief Joseph	09/1991	09/2029	8.750%	3,840	0	
357	Chief Joseph	09/1992	09/2008	8.500%	142	0	
358	Chief Joseph	09/1992	09/2008	8.500%	717	0	
359	Chief Joseph	09/1992	09/2029	8.500%	2,032	0	
360	Chief Joseph	09/1993	09/2008	7.875%	42	0	
361	Chief Joseph	09/1993	09/2008	7.875%	794	0	
362	Chief Joseph	09/1993	09/2029	7.875%	1,360	0	
363	Chief Joseph	09/1994	09/2029	7.125%	129	0	
364	Chief Joseph	09/1994	09/2029	7.125%	65	0	
365	Chief Joseph	09/1994	09/2044	7.150%	4,280	4,017	
366	Chief Joseph	09/1995	09/2010	7.090%	15	0	
367	Chief Joseph	09/1995	09/2045	7.150%	147	147	
368	Chief Joseph	09/1995	09/2045	7.150%	562	562	
369	Chief Joseph	09/1995	09/2045	7.150%	712	712	
370	Chief Joseph	09/1995	09/2045	7.150%	784	784	
371	Chief Joseph	09/1996	09/2031	7.150%	27	0	
372	Chief Joseph	09/1996	09/2046	7.150%	3	3	
373	Chief Joseph	09/1996	09/2046	7.150%	4	4	
374	Chief Joseph	09/1996	09/2046	7.150%	355	355	
375	Chief Joseph	09/1996	09/2046	7.150%	729	729	
376	Chief Joseph	09/1997	09/2032	7.150%	166	0	
377	Chief Joseph	09/1997	09/2047	7.150%	657	657	
378	Chief Joseph	09/2001	09/2051	5.875%	345	345	
379	Chief Joseph	09/2002	09/2052	5.500%	2	2	
380	Chief Joseph	09/2003	09/2053	5.125%	992	992	
381	Chief Joseph	09/2008	09/2058	4.875%	3,500	3,500	
382	Chief Joseph	09/2009	09/2059	4.375%	24,727	24,727	
383	Chief Joseph	09/2011	09/2061	3.750%	4	4	
384	Chief Joseph	09/2012	09/2062	3.375%	28	28	
385	Chief Joseph	09/2013	09/2063	2.875%	10	10	
386	Columbia Basin	09/1941	09/1991	3.000%	10,919	0	
387	Columbia Basin	09/1941	09/1991	3.000%	1,505	0	
388	Columbia Basin	09/1942	09/1992	3.000%	16,165	0	
389	Columbia Basin	09/1942	09/1992	3.000%	3,011	0	
390	Columbia Basin	09/1943	09/1993	3.000%	8,083	0	
391	Columbia Basin	09/1943	09/1993	3.000%	1,505	0	
392	Columbia Basin	09/1944	09/1994	3.000%	16,165	0	
393	Columbia Basin	09/1944	09/1994	3.000%	3,011	0	
394	Columbia Basin	09/1948	09/1998	3.000%	24,247	0	
395	Columbia Basin	09/1948	09/1998	3.000%	4,516	0	
396	Columbia Basin	09/1949	09/1999	3.000%	24,247	0	
397	Columbia Basin	09/1949	09/1999	3.000%	4,516	0	
398	Columbia Basin	09/1950	09/2000	3.000%	16,165	0	
399	Columbia Basin	09/1950	09/2000	3.000%	3,011	0	
400	Columbia Basin	09/1951	09/2001	6.710%	28,255	0	
401	Columbia Basin	09/1951	09/2001	6.710%	5,790	0	
402	Columbia Basin	09/1952	09/2001	6.710%	258	0	
403	Columbia Basin	09/1952	09/2001	6.710%	48	0	
404	Columbia Basin	09/1953	09/2001	6.710%	258	0	
405	Columbia Basin	09/1953	09/2001	6.710%	48	0	
406	Columbia Basin	09/1954	09/2001	6.710%	258	0	
407	Columbia Basin	09/1954	09/2001	6.710%	48	0	
408	Columbia Basin	09/1955	09/2001	6.710%	258	0	
409	Columbia Basin	09/1955	09/2001	6.710%	48	0	
410	Columbia Basin	09/1956	09/2001	6.710%	259	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
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(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
411	Columbia Basin	09/1956	09/2001	6.710%	48	0	
412	Columbia Basin	09/1957	09/2001	6.710%	258	0	
413	Columbia Basin	09/1957	09/2001	6.710%	48	0	
414	Columbia Basin	09/1958	09/2001	6.710%	258	0	
415	Columbia Basin	09/1958	09/2001	6.710%	48	0	
416	Columbia Basin	09/1959	09/2001	6.710%	258	0	
417	Columbia Basin	09/1959	09/2001	6.710%	48	0	
418	Columbia Basin	09/1960	09/2001	6.710%	258	0	
419	Columbia Basin	09/1960	09/2001	6.710%	48	0	
420	Columbia Basin	09/1961	09/2001	6.710%	259	0	
421	Columbia Basin	09/1961	09/2001	6.710%	48	0	
422	Columbia Basin	09/1962	09/2001	6.710%	258	0	
423	Columbia Basin	09/1962	09/2001	6.710%	48	0	
424	Columbia Basin	09/1963	09/2001	6.710%	258	0	
425	Columbia Basin	09/1963	09/2001	6.710%	48	0	
426	Columbia Basin	09/1964	09/2001	6.710%	258	0	
427	Columbia Basin	09/1964	09/2001	6.710%	48	0	
428	Columbia Basin	09/1965	09/2001	6.710%	258	0	
429	Columbia Basin	09/1965	09/2001	6.710%	48	0	
430	Columbia Basin	09/1966	09/2001	6.710%	259	0	
431	Columbia Basin	09/1966	09/2001	6.710%	48	0	
432	Columbia Basin	09/1967	09/2001	6.710%	258	0	
433	Columbia Basin	09/1967	09/2001	6.710%	48	0	
434	Columbia Basin	09/1967	09/2017	7.290%	758	0	
435	Columbia Basin	09/1968	09/2001	6.710%	258	0	
436	Columbia Basin	09/1968	09/2001	6.710%	48	0	
437	Columbia Basin	09/1969	09/2001	6.710%	258	0	
438	Columbia Basin	09/1969	09/2001	6.710%	48	0	
439	Columbia Basin	09/1970	09/2001	6.710%	258	0	
440	Columbia Basin	09/1970	09/2001	6.710%	48	0	
441	Columbia Basin	09/1971	09/2001	6.710%	259	0	
442	Columbia Basin	09/1971	09/2001	6.710%	48	0	
443	Columbia Basin	09/1972	09/2001	6.710%	258	0	
444	Columbia Basin	09/1972	09/2001	6.710%	48	0	
445	Columbia Basin	09/1973	09/2001	6.710%	258	0	
446	Columbia Basin	09/1973	09/2001	6.710%	48	0	
447	Columbia Basin	09/1974	09/2001	6.710%	258	0	
448	Columbia Basin	09/1974	09/2001	6.710%	48	0	
449	Columbia Basin	09/1975	09/2001	6.710%	258	0	
450	Columbia Basin	09/1975	09/2001	6.710%	48	0	
451	Columbia Basin	09/1976	09/2001	6.710%	259	0	
452	Columbia Basin	09/1976	09/2001	6.710%	48	0	
453	Columbia Basin	09/1977	09/2001	6.710%	258	0	
454	Columbia Basin	09/1977	09/2001	6.710%	48	0	
455	Columbia Basin	09/1978	09/2001	6.710%	258	0	
456	Columbia Basin	09/1978	09/2001	6.710%	48	0	
457	Columbia Basin	09/1979	09/2001	6.710%	258	0	
458	Columbia Basin	09/1979	09/2001	6.710%	48	0	
459	Columbia Basin	09/1980	09/2001	6.710%	258	0	
460	Columbia Basin	09/1980	09/2001	6.710%	48	0	
461	Columbia Basin	09/1981	09/2001	6.710%	259	0	
462	Columbia Basin	09/1981	09/2001	6.710%	48	0	
463	Columbia Basin	09/1982	09/2001	6.710%	258	0	
464	Columbia Basin	09/1982	09/2001	6.710%	48	0	
465	Columbia Basin	09/1983	09/2001	6.710%	258	0	
466	Columbia Basin	09/1983	09/2001	6.710%	48	0	
467	Columbia Basin	09/1984	09/2001	10.750%	7,815	0	
468	Columbia Basin	09/1984	09/2001	10.750%	1,455	0	
469	Columbia Basin	09/1985	09/2001	6.710%	236	0	
470	Columbia Basin	09/1985	09/2001	6.710%	11	0	
471	Columbia Basin	09/1985	09/2001	12.375%	7,338	0	
472	Columbia Basin	09/1985	09/2001	12.375%	362	0	
473	Columbia Basin	09/1986	09/2001	6.710%	127	0	
474	Columbia Basin	09/1987	09/2001	6.710%	13	0	
475	Columbia Basin	09/1988	09/2001	8.500%	184	0	
476	Columbia Basin	09/1988	09/2001	8.500%	2	0	
477	Columbia Basin	09/1989	09/2001	9.250%	1,166	0	
478	Columbia Basin	09/1990	09/2001	8.875%	928	0	
479	Columbia Basin	09/1991	09/2001	8.750%	177	0	
480	Columbia Basin	09/1991	09/2001	8.750%	1,661	0	
481	Columbia Basin	09/1992	09/2001	8.500%	445	0	
482	Columbia Basin	09/1992	09/2001	8.500%	652	0	
483	Columbia Basin	09/1993	09/2001	6.710%	792	0	
484	Columbia Basin	09/1995	09/2000	6.620%	25	0	
485	Columbia Basin	09/1995	09/2020	7.250%	206	0	
486	Columbia Basin	09/1995	09/2030	7.150%	25	0	
487	Columbia Basin	09/1995	09/2030	7.860%	270	0	
488	Columbia Basin	09/1995	09/2030	7.860%	321	0	
489	Columbia Basin	09/1995	09/2030	7.860%	323	0	
490	Columbia Basin	09/1995	09/2030	7.860%	20	0	
491	Columbia Basin	09/1995	09/2045	7.150%	287	287	
492	Columbia Basin	09/1995	09/2045	7.150%	2,511	2,453	

**TABLE 11A:
HISTORICAL INVESTMENTS
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(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
493	Columbia Basin	09/1995	09/2045	7.860%	450	0	
494	Columbia Basin	09/1995	09/2045	7.860%	450	0	
495	Columbia Basin	09/1996	09/2026	7.150%	72	0	
496	Columbia Basin	09/1996	09/2031	7.150%	109	0	
497	Columbia Basin	09/1996	09/2031	7.150%	251	0	
498	Columbia Basin	09/1996	09/2046	7.150%	426	426	
499	Columbia Basin	09/1996	09/2046	7.150%	368	368	
500	Columbia Basin	09/1997	09/2047	7.150%	3,393	3,393	
501	Columbia Basin	09/2001	09/2051	5.875%	69,226	69,226	
502	Columbia Basin	09/2005	09/2055	5.125%	10,963	10,963	
503	Columbia Basin	09/2006	09/2056	4.500%	1,987	1,987	
504	Columbia Basin	09/2007	09/2057	5.000%	929	929	
505	Columbia Basin	09/2008	09/2058	4.875%	835	835	
506	Columbia Basin	09/2009	09/2059	4.375%	1,338	1,338	
507	Columbia Basin	09/2010	09/2060	4.250%	877	877	
508	Columbia Basin	09/2011	09/2061	3.750%	1,723	1,723	
509	Columbia Basin	09/2012	09/2062	3.375%	11	11	
510	Columbia Basin	09/2013	09/2063	2.875%	3,083	3,083	
511	Columbia Basin	09/2014	09/2064	3.875%	18	18	
512	Columbia Basin	09/2015	09/2065	3.250%	0	0	
513	Columbia Basin 3rd Powerhouse	09/1975	09/2025	7.160%	47,328	0	
514	Columbia Basin 3rd Powerhouse	09/1975	09/2025	7.160%	8,702	0	
515	Columbia Basin 3rd Powerhouse	09/1976	09/2026	7.150%	41,330	0	
516	Columbia Basin 3rd Powerhouse	09/1976	09/2026	7.150%	8,037	0	
517	Columbia Basin 3rd Powerhouse	09/1977	09/2027	7.150%	42,764	0	
518	Columbia Basin 3rd Powerhouse	09/1977	09/2027	7.150%	7,964	0	
519	Columbia Basin 3rd Powerhouse	09/1978	09/2028	7.150%	42,399	0	
520	Columbia Basin 3rd Powerhouse	09/1978	09/2028	7.150%	7,896	0	
521	Columbia Basin 3rd Powerhouse	09/1979	09/2029	7.150%	84,118	0	
522	Columbia Basin 3rd Powerhouse	09/1979	09/2029	7.150%	15,666	0	
523	Columbia Basin 3rd Powerhouse	09/1983	09/2033	7.150%	712	0	
524	Columbia Basin 3rd Powerhouse	09/1983	09/2033	7.150%	13,003	0	
525	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	16,965	0	
526	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	13,192	0	
527	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	3,160	0	
528	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	2,060	0	
529	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	41,772	0	
530	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	107	0	
531	Columbia Basin 3rd Powerhouse	09/1986	09/2033	7.150%	1,851	0	
532	Columbia Basin 3rd Powerhouse	09/1986	09/2033	7.150%	15,538	0	
533	Columbia Basin 3rd Powerhouse	09/1987	09/2033	7.150%	1,730	0	
534	Columbia Basin 3rd Powerhouse	09/1987	09/2033	7.150%	14,439	0	
535	Columbia Basin 3rd Powerhouse	09/1988	09/2033	7.150%	2,294	0	
536	Columbia Basin 3rd Powerhouse	09/1988	09/2033	7.150%	4,351	0	
537	Columbia Basin 3rd Powerhouse	09/1989	09/2033	7.150%	10,902	0	
538	Columbia Basin 3rd Powerhouse	09/1990	09/2033	7.150%	6,383	0	
539	Columbia Basin 3rd Powerhouse	09/1994	09/2044	7.150%	12,631	12,631	
540	Columbia River Fish Mitigation	09/1991	09/2041	8.500%	3,969	0	
541	Columbia River Fish Mitigation	09/1992	09/2042	8.500%	874	0	
542	Columbia River Fish Mitigation	09/1993	09/2043	8.500%	85,846	0	
543	Columbia River Fish Mitigation	09/1994	09/2044	8.500%	39,454	0	
544	Columbia River Fish Mitigation	09/1995	09/2045	7.150%	43,343	39,282	
545	Columbia River Fish Mitigation	09/1996	09/2046	7.150%	2,431	2,431	
546	Columbia River Fish Mitigation	09/1999	09/2049	5.375%	14,115	14,115	
547	Columbia River Fish Mitigation	09/2000	09/2050	6.125%	47,006	47,006	
548	Columbia River Fish Mitigation	09/2001	09/2051	5.875%	6,168	6,168	
549	Columbia River Fish Mitigation	09/2002	09/2052	5.500%	8,797	8,797	
550	Columbia River Fish Mitigation	09/2003	09/2053	5.125%	68,440	68,440	
551	Columbia River Fish Mitigation	09/2004	09/2054	5.375%	60,581	60,581	
552	Columbia River Fish Mitigation	09/2005	09/2055	5.125%	52,039	52,039	
553	Columbia River Fish Mitigation	09/2006	09/2056	4.500%	366,395	366,395	
554	Columbia River Fish Mitigation	09/2007	09/2057	5.000%	53,525	53,525	
555	Columbia River Fish Mitigation	09/2008	09/2058	4.875%	36,554	36,554	
556	Columbia River Fish Mitigation	09/2009	09/2059	4.375%	103,203	103,203	
557	Columbia River Fish Mitigation	09/2010	09/2060	4.250%	56,832	56,832	
558	Columbia River Fish Mitigation	09/2011	09/2061	3.750%	106,014	106,014	
559	Columbia River Fish Mitigation	09/2012	09/2062	3.375%	101,616	101,616	
560	Columbia River Fish Mitigation	09/2013	09/2063	2.875%	95,274	95,274	
561	Columbia River Fish Mitigation	09/2014	09/2064	3.875%	110,071	110,071	
562	Columbia River Fish Mitigation	09/2015	09/2065	3.250%	64,291	64,291	
563	Columbia River Fish Mitigation	09/2016	09/2066	3.000%	30,190	30,190	
564	Cougar	09/1964	09/2014	7.230%	10,414	0	
565	Cougar	09/1965	09/2014	7.230%	20	0	
566	Cougar	09/1966	09/2014	7.230%	20	0	
567	Cougar	09/1967	09/2014	7.230%	20	0	
568	Cougar	09/1968	09/2014	7.230%	20	0	
569	Cougar	09/1969	09/2014	7.230%	20	0	
570	Cougar	09/1970	09/2014	7.230%	20	0	
571	Cougar	09/1971	09/2014	7.230%	20	0	
572	Cougar	09/1972	09/2014	7.230%	20	0	
573	Cougar	09/1973	09/2014	7.230%	20	0	
574	Cougar	09/1974	09/2014	7.230%	19	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
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(\$000s) (FY 2018)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
575	Cougar	09/1975	09/2014	7.230%	20	0		
576	Cougar	09/1976	09/2014	7.230%	20	0		
577	Cougar	09/1977	09/2014	7.230%	20	0		
578	Cougar	09/1978	09/2014	7.230%	20	0		
579	Cougar	09/1979	09/2014	7.230%	20	0		
580	Cougar	09/1980	09/2014	7.230%	20	0		
581	Cougar	09/1981	09/2014	7.230%	20	0		
582	Cougar	09/1982	09/2014	7.230%	20	0		
583	Cougar	09/1983	09/2014	7.230%	20	0		
584	Cougar	09/1984	09/2014	10.750%	1	0		
585	Cougar	09/1985	09/2014	7.230%	1	0		
586	Cougar	09/1986	09/2014	7.230%	104	0		
587	Cougar	09/1986	09/2014	11.375%	55	0		
588	Cougar	09/1987	09/2014	7.230%	45	0		
589	Cougar	09/1988	09/2014	8.500%	2	0		
590	Cougar	09/1989	09/2014	9.250%	6	0		
591	Cougar	09/1990	09/2014	8.875%	10	0		
592	Cougar	09/1991	09/2014	8.750%	1,015	0		
593	Cougar	09/1991	09/2014	8.750%	1	0		
594	Cougar	09/1992	09/2014	8.500%	2	0		
595	Cougar	09/1993	09/2014	7.875%	539	0		
596	Cougar	09/1994	09/2019	7.125%	31	0		
597	Cougar	09/1995	09/2000	7.330%	3	0		
598	Cougar	09/1997	09/2047	7.150%	26	26		
599	Cougar	09/2004	09/2054	5.375%	3,622	3,622		
600	Cougar	09/2005	09/2055	5.125%	8,130	8,130		
601	Cougar	09/2006	09/2056	4.500%	109	109		
602	Cougar	09/2007	09/2057	5.000%	120	120		
603	Cougar	09/2009	09/2059	4.375%	121	121		
604	Cougar	09/2010	09/2060	4.250%	59	59		
605	Cougar	09/2011	09/2061	3.750%	282	282		
606	Cougar	09/2012	09/2062	3.375%	139	139		
607	Cougar	09/2013	09/2063	2.875%	4,088	4,088		
608	Cougar	09/2014	09/2064	3.875%	12	12		
609	Cougar	09/2016	09/2066	3.000%	2	2		
610	Detroit Lake/Big Cliff	09/1953	09/2003	6.840%	12,533	0		
611	Detroit Lake/Big Cliff	09/1954	09/2004	6.880%	20,162	0		
612	Detroit Lake/Big Cliff	09/1955	09/2004	6.880%	18	0		
613	Detroit Lake/Big Cliff	09/1956	09/2004	6.880%	19	0		
614	Detroit Lake/Big Cliff	09/1957	09/2004	6.880%	18	0		
615	Detroit Lake/Big Cliff	09/1958	09/2004	6.880%	19	0		
616	Detroit Lake/Big Cliff	09/1959	09/2004	6.880%	18	0		
617	Detroit Lake/Big Cliff	09/1960	09/2004	6.880%	19	0		
618	Detroit Lake/Big Cliff	09/1961	09/2004	6.880%	18	0		
619	Detroit Lake/Big Cliff	09/1962	09/2004	6.880%	19	0		
620	Detroit Lake/Big Cliff	09/1963	09/2004	6.880%	18	0		
621	Detroit Lake/Big Cliff	09/1964	09/2004	6.880%	19	0		
622	Detroit Lake/Big Cliff	09/1965	09/2004	6.880%	18	0		
623	Detroit Lake/Big Cliff	09/1966	09/2004	6.880%	19	0		
624	Detroit Lake/Big Cliff	09/1967	09/2004	6.880%	18	0		
625	Detroit Lake/Big Cliff	09/1968	09/2004	6.880%	19	0		
626	Detroit Lake/Big Cliff	09/1969	09/2004	6.880%	18	0		
627	Detroit Lake/Big Cliff	09/1970	09/2004	6.880%	19	0		
628	Detroit Lake/Big Cliff	09/1971	09/2004	6.880%	18	0		
629	Detroit Lake/Big Cliff	09/1972	09/2004	6.880%	19	0		
630	Detroit Lake/Big Cliff	09/1973	09/2004	6.880%	18	0		
631	Detroit Lake/Big Cliff	09/1974	09/2004	6.880%	19	0		
632	Detroit Lake/Big Cliff	09/1975	09/2004	6.880%	18	0		
633	Detroit Lake/Big Cliff	09/1976	09/2004	6.880%	19	0		
634	Detroit Lake/Big Cliff	09/1977	09/2004	6.880%	18	0		
635	Detroit Lake/Big Cliff	09/1978	09/2004	6.880%	19	0		
636	Detroit Lake/Big Cliff	09/1979	09/2004	6.880%	18	0		
637	Detroit Lake/Big Cliff	09/1980	09/2004	6.880%	19	0		
638	Detroit Lake/Big Cliff	09/1981	09/2004	6.880%	18	0		
639	Detroit Lake/Big Cliff	09/1982	09/2004	6.880%	19	0		
640	Detroit Lake/Big Cliff	09/1983	09/2004	6.880%	18	0		
641	Detroit Lake/Big Cliff	09/1984	09/2004	10.750%	21	0		
642	Detroit Lake/Big Cliff	09/1985	09/2004	6.880%	6	0		
643	Detroit Lake/Big Cliff	09/1986	09/2004	11.375%	38	0		
644	Detroit Lake/Big Cliff	09/1987	09/2004	6.880%	3	0		
645	Detroit Lake/Big Cliff	09/1987	09/2004	8.875%	233	0		
646	Detroit Lake/Big Cliff	09/1988	09/2004	8.500%	68	0		
647	Detroit Lake/Big Cliff	09/1989	09/2004	9.250%	26	0		
648	Detroit Lake/Big Cliff	09/1990	09/2004	8.875%	115	0		
649	Detroit Lake/Big Cliff	09/1991	09/2004	8.750%	9	0		
650	Detroit Lake/Big Cliff	09/1991	09/2004	8.750%	20	0		
651	Detroit Lake/Big Cliff	09/1992	09/2004	8.500%	8	0		
652	Detroit Lake/Big Cliff	09/1993	09/2004	7.875%	211	0		
653	Detroit Lake/Big Cliff	09/1994	09/1999	7.125%	7	0		
654	Detroit Lake/Big Cliff	09/1995	09/2000	7.330%	13	0		
655	Detroit Lake/Big Cliff	09/1995	09/2045	7.150%	38	38		
656	Detroit Lake/Big Cliff	09/1996	09/2006	6.950%	24	0		

**TABLE 11A:
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(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
657	Detroit Lake/Big Cliff	09/2001	09/2051	5.875%	282	282	
658	Detroit Lake/Big Cliff	09/2002	09/2052	5.500%	18	18	
659	Detroit Lake/Big Cliff	09/2003	09/2053	5.125%	223	223	
660	Detroit Lake/Big Cliff	09/2005	09/2055	5.125%	1,031	1,031	
661	Detroit Lake/Big Cliff	09/2013	09/2063	2.875%	528	528	
662	Detroit Lake/Big Cliff	09/2014	09/2064	3.875%	18	18	
663	Detroit Lake/Big Cliff	09/2016	09/2066	3.000%	31	31	
664	Dworshak	09/1973	09/2023	7.190%	138,443	0	
665	Dworshak	09/1973	09/2023	7.190%	836	0	
666	Dworshak	09/1974	09/2023	7.190%	515	0	
667	Dworshak	09/1974	09/2023	7.190%	3	0	
668	Dworshak	09/1975	09/2023	7.190%	518	0	
669	Dworshak	09/1975	09/2023	7.190%	3	0	
670	Dworshak	09/1976	09/2023	7.190%	518	0	
671	Dworshak	09/1976	09/2023	7.190%	3	0	
672	Dworshak	09/1977	09/2023	7.190%	518	0	
673	Dworshak	09/1977	09/2023	7.190%	3	0	
674	Dworshak	09/1978	09/2023	7.190%	518	0	
675	Dworshak	09/1978	09/2023	7.190%	3	0	
676	Dworshak	09/1979	09/2023	7.190%	518	0	
677	Dworshak	09/1979	09/2023	7.190%	3	0	
678	Dworshak	09/1980	09/2023	7.190%	518	0	
679	Dworshak	09/1980	09/2023	7.190%	3	0	
680	Dworshak	09/1981	09/2023	7.190%	518	0	
681	Dworshak	09/1981	09/2023	7.190%	3	0	
682	Dworshak	09/1982	09/2023	7.190%	518	0	
683	Dworshak	09/1982	09/2023	7.190%	3	0	
684	Dworshak	09/1983	09/2023	7.190%	523	0	
685	Dworshak	09/1983	09/2023	7.190%	3	0	
686	Dworshak	09/1984	09/2023	10.750%	2,499	0	
687	Dworshak	09/1984	09/2023	10.750%	15	0	
688	Dworshak	09/1985	09/2023	7.190%	1,141	0	
689	Dworshak	09/1986	09/2023	7.190%	197	0	
690	Dworshak	09/1987	09/2023	7.190%	36	0	
691	Dworshak	09/1987	09/2023	8.875%	65	0	
692	Dworshak	09/1988	09/2023	8.500%	61	0	
693	Dworshak	09/1989	09/2023	9.250%	63	0	
694	Dworshak	09/1990	09/2023	8.875%	245	0	
695	Dworshak	09/1990	09/2023	8.875%	24	0	
696	Dworshak	09/1991	09/2023	8.750%	224	0	
697	Dworshak	09/1992	09/2023	2.625%	4	0	
698	Dworshak	09/1992	09/2023	8.500%	28	0	
699	Dworshak	09/1992	09/2023	8.500%	24	0	
700	Dworshak	09/1993	09/2023	7.875%	41	0	
701	Dworshak	09/1993	09/2023	7.875%	1,872	0	
702	Dworshak	09/1994	09/2029	7.125%	1,351	0	
703	Dworshak	09/1994	09/2029	7.125%	964	0	
704	Dworshak	09/1995	09/2020	7.930%	55	0	
705	Dworshak	09/1995	09/2030	7.150%	218	0	
706	Dworshak	09/1995	09/2045	7.150%	1,162	1,162	
707	Dworshak	09/1996	09/2011	7.130%	107	0	
708	Dworshak	09/1996	09/2021	7.230%	26	0	
709	Dworshak	09/1996	09/2021	7.230%	184	0	
710	Dworshak	09/1996	09/2031	7.150%	6	0	
711	Dworshak	09/1996	09/2031	7.150%	203	0	
712	Dworshak	09/1996	09/2046	7.150%	3	3	
713	Dworshak	09/1996	09/2046	7.150%	4	4	
714	Dworshak	09/1996	09/2046	7.150%	46	46	
715	Dworshak	09/1997	09/2047	7.150%	7,588	7,588	
716	Dworshak	09/1999	09/2049	5.375%	630	630	
717	Dworshak	09/2002	09/2052	5.500%	199	199	
718	Dworshak	09/2003	09/2053	5.125%	761	761	
719	Dworshak	09/2005	09/2055	5.125%	713	713	
720	Dworshak	09/2006	09/2056	4.500%	73	73	
721	Dworshak	09/2008	09/2058	4.875%	10	10	
722	Dworshak	09/2009	09/2059	4.375%	2,307	2,307	
723	Dworshak	09/2014	09/2064	3.875%	50	0	
724	Green Peter/Foster	09/1967	09/2017	7.290%	24,445	0	
725	Green Peter/Foster	09/1968	09/2018	7.280%	12,180	0	
726	Green Peter/Foster	09/1969	09/2018	7.280%	39	0	
727	Green Peter/Foster	09/1970	09/2018	7.280%	40	0	
728	Green Peter/Foster	09/1971	09/2018	7.280%	39	0	
729	Green Peter/Foster	09/1972	09/2018	7.280%	39	0	
730	Green Peter/Foster	09/1973	09/2018	7.280%	39	0	
731	Green Peter/Foster	09/1974	09/2018	7.280%	39	0	
732	Green Peter/Foster	09/1975	09/2018	7.280%	39	0	
733	Green Peter/Foster	09/1976	09/2018	7.280%	39	0	
734	Green Peter/Foster	09/1977	09/2018	7.280%	39	0	
735	Green Peter/Foster	09/1978	09/2018	7.280%	39	0	
736	Green Peter/Foster	09/1979	09/2018	7.280%	39	0	
737	Green Peter/Foster	09/1980	09/2018	7.280%	40	0	
738	Green Peter/Foster	09/1981	09/2018	7.280%	39	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
739	Green Peter/Foster	09/1982	09/2018	7.280%	39	0	
740	Green Peter/Foster	09/1983	09/2018	7.280%	39	0	
741	Green Peter/Foster	09/1984	09/2018	10.750%	15	0	
742	Green Peter/Foster	09/1985	09/2018	7.280%	16	0	
743	Green Peter/Foster	09/1986	09/2018	7.280%	3	0	
744	Green Peter/Foster	09/1986	09/2018	11.375%	3	0	
745	Green Peter/Foster	09/1987	09/2018	7.280%	1	0	
746	Green Peter/Foster	09/1987	09/2018	8.875%	2	0	
747	Green Peter/Foster	09/1988	09/2018	8.500%	13	0	
748	Green Peter/Foster	09/1989	09/2018	9.250%	24	0	
749	Green Peter/Foster	09/1990	09/2018	8.875%	5	0	
750	Green Peter/Foster	09/1991	09/2018	8.750%	48	0	
751	Green Peter/Foster	09/1992	09/2018	8.500%	2	0	
752	Green Peter/Foster	09/1993	09/2018	7.875%	41	0	
753	Green Peter/Foster	09/1994	09/1999	7.125%	6	0	
754	Green Peter/Foster	09/1995	09/2000	7.330%	4	0	
755	Green Peter/Foster	09/1995	09/2020	7.250%	11	0	
756	Green Peter/Foster	09/1995	09/2020	7.250%	24	0	
757	Green Peter/Foster	09/1996	09/2046	7.150%	26	26	
758	Green Peter/Foster	09/2001	09/2051	5.875%	200	200	
759	Green Peter/Foster	09/2011	09/2061	3.750%	87	87	
760	Green Peter/Foster	09/2012	09/2062	3.375%	28	28	
761	Green Peter/Foster	09/2014	09/2064	3.875%	385	385	
762	Green Peter/Foster	09/2015	09/2065	3.250%	68	68	
763	Green Peter/Foster	09/2016	09/2066	3.000%	70	70	
764	Hills Creek	09/1962	09/2012	7.160%	10,353	0	
765	Hills Creek	09/1963	09/2012	7.160%	12	0	
766	Hills Creek	09/1964	09/2012	7.160%	13	0	
767	Hills Creek	09/1965	09/2012	7.160%	13	0	
768	Hills Creek	09/1966	09/2012	7.160%	13	0	
769	Hills Creek	09/1967	09/2012	7.160%	13	0	
770	Hills Creek	09/1968	09/2012	7.160%	13	0	
771	Hills Creek	09/1969	09/2012	7.160%	13	0	
772	Hills Creek	09/1970	09/2012	7.160%	13	0	
773	Hills Creek	09/1971	09/2012	7.160%	13	0	
774	Hills Creek	09/1972	09/2012	7.160%	13	0	
775	Hills Creek	09/1973	09/2012	7.160%	13	0	
776	Hills Creek	09/1974	09/2012	7.160%	13	0	
777	Hills Creek	09/1975	09/2012	7.160%	13	0	
778	Hills Creek	09/1976	09/2012	7.160%	13	0	
779	Hills Creek	09/1977	09/2012	7.160%	13	0	
780	Hills Creek	09/1978	09/2012	7.160%	13	0	
781	Hills Creek	09/1979	09/2012	7.160%	13	0	
782	Hills Creek	09/1980	09/2012	7.160%	13	0	
783	Hills Creek	09/1981	09/2012	7.160%	13	0	
784	Hills Creek	09/1982	09/2012	7.160%	13	0	
785	Hills Creek	09/1983	09/2012	7.160%	13	0	
786	Hills Creek	09/1984	09/2012	10.750%	52	0	
787	Hills Creek	09/1985	09/2012	7.160%	6	0	
788	Hills Creek	09/1987	09/2012	8.875%	3	0	
789	Hills Creek	09/1988	09/2012	8.500%	3	0	
790	Hills Creek	09/1990	09/2012	8.875%	3	0	
791	Hills Creek	09/1991	09/2012	8.750%	17	0	
792	Hills Creek	09/1992	09/2012	8.500%	1	0	
793	Hills Creek	09/1993	09/2012	7.875%	13	0	
794	Hills Creek	09/1996	09/2046	7.150%	28	28	
795	Hills Creek	09/2000	09/2050	6.125%	2,630	2,630	
796	Hills Creek	09/2001	09/2051	5.875%	8	8	
797	Hills Creek	09/2002	09/2052	5.500%	2	2	
798	Hills Creek	09/2005	09/2055	5.125%	46	46	
799	Hills Creek	09/2011	09/2061	3.750%	12	12	
800	Hills Creek	09/2012	09/2062	3.375%	142	142	
801	Hungry Horse Dam	09/1953	09/2003	6.840%	75,076	0	
802	Hungry Horse Dam	09/1953	09/2003	6.840%	2,126	0	
803	Hungry Horse Dam	09/1954	09/2003	6.840%	17	0	
804	Hungry Horse Dam	09/1954	09/2003	6.840%	1	0	
805	Hungry Horse Dam	09/1955	09/2003	6.840%	17	0	
806	Hungry Horse Dam	09/1955	09/2003	6.840%	1	0	
807	Hungry Horse Dam	09/1956	09/2003	6.840%	17	0	
808	Hungry Horse Dam	09/1956	09/2003	6.840%	1	0	
809	Hungry Horse Dam	09/1957	09/2003	6.840%	18	0	
810	Hungry Horse Dam	09/1957	09/2003	6.840%	1	0	
811	Hungry Horse Dam	09/1958	09/2003	6.840%	18	0	
812	Hungry Horse Dam	09/1958	09/2003	6.840%	1	0	
813	Hungry Horse Dam	09/1959	09/2003	6.840%	18	0	
814	Hungry Horse Dam	09/1959	09/2003	6.840%	1	0	
815	Hungry Horse Dam	09/1960	09/2003	6.840%	18	0	
816	Hungry Horse Dam	09/1960	09/2003	6.840%	1	0	
817	Hungry Horse Dam	09/1961	09/2003	6.840%	18	0	
818	Hungry Horse Dam	09/1961	09/2003	6.840%	1	0	
819	Hungry Horse Dam	09/1962	09/2003	6.840%	18	0	
820	Hungry Horse Dam	09/1962	09/2003	6.840%	1	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
821	Hungry Horse Dam	09/1963	09/2003	6.840%	18	0	
822	Hungry Horse Dam	09/1963	09/2003	6.840%	1	0	
823	Hungry Horse Dam	09/1964	09/2003	6.840%	17	0	
824	Hungry Horse Dam	09/1964	09/2003	6.840%	1	0	
825	Hungry Horse Dam	09/1965	09/2003	6.840%	17	0	
826	Hungry Horse Dam	09/1965	09/2003	6.840%	1	0	
827	Hungry Horse Dam	09/1966	09/2003	6.840%	17	0	
828	Hungry Horse Dam	09/1966	09/2003	6.840%	1	0	
829	Hungry Horse Dam	09/1967	09/2003	6.840%	18	0	
830	Hungry Horse Dam	09/1967	09/2003	6.840%	1	0	
831	Hungry Horse Dam	09/1968	09/2003	6.840%	18	0	
832	Hungry Horse Dam	09/1968	09/2003	6.840%	1	0	
833	Hungry Horse Dam	09/1969	09/2003	6.840%	18	0	
834	Hungry Horse Dam	09/1969	09/2003	6.840%	1	0	
835	Hungry Horse Dam	09/1970	09/2003	6.840%	18	0	
836	Hungry Horse Dam	09/1970	09/2003	6.840%	1	0	
837	Hungry Horse Dam	09/1971	09/2003	6.840%	18	0	
838	Hungry Horse Dam	09/1971	09/2003	6.840%	1	0	
839	Hungry Horse Dam	09/1972	09/2003	6.840%	18	0	
840	Hungry Horse Dam	09/1972	09/2003	6.840%	1	0	
841	Hungry Horse Dam	09/1973	09/2003	6.840%	18	0	
842	Hungry Horse Dam	09/1973	09/2003	6.840%	1	0	
843	Hungry Horse Dam	09/1974	09/2003	6.840%	17	0	
844	Hungry Horse Dam	09/1974	09/2003	6.840%	1	0	
845	Hungry Horse Dam	09/1975	09/2003	6.840%	17	0	
846	Hungry Horse Dam	09/1975	09/2003	6.840%	1	0	
847	Hungry Horse Dam	09/1976	09/2003	6.840%	10	0	
848	Hungry Horse Dam	09/1976	09/2003	6.840%	1	0	
849	Hungry Horse Dam	09/1977	09/2003	6.840%	18	0	
850	Hungry Horse Dam	09/1977	09/2003	6.840%	1	0	
851	Hungry Horse Dam	09/1978	09/2003	6.840%	18	0	
852	Hungry Horse Dam	09/1978	09/2003	6.840%	1	0	
853	Hungry Horse Dam	09/1979	09/2003	6.840%	18	0	
854	Hungry Horse Dam	09/1979	09/2003	6.840%	1	0	
855	Hungry Horse Dam	09/1980	09/2003	6.840%	18	0	
856	Hungry Horse Dam	09/1980	09/2003	6.840%	1	0	
857	Hungry Horse Dam	09/1981	09/2003	6.840%	22	0	
858	Hungry Horse Dam	09/1981	09/2003	6.840%	1	0	
859	Hungry Horse Dam	09/1982	09/2003	6.840%	1	0	
860	Hungry Horse Dam	09/1983	09/2003	6.840%	12	0	
861	Hungry Horse Dam	09/1983	09/2003	6.840%	1	0	
862	Hungry Horse Dam	09/1984	09/2003	10.750%	32	0	
863	Hungry Horse Dam	09/1984	09/2003	10.750%	1	0	
864	Hungry Horse Dam	09/1985	09/2003	12.375%	36	0	
865	Hungry Horse Dam	09/1985	09/2003	12.375%	37	0	
866	Hungry Horse Dam	09/1989	09/2003	9.250%	101	0	
867	Hungry Horse Dam	09/1990	09/2003	8.875%	58	0	
868	Hungry Horse Dam	09/1991	09/2003	8.750%	19	0	
869	Hungry Horse Dam	09/1992	09/2003	8.500%	9	0	
870	Hungry Horse Dam	09/1993	09/2003	7.875%	4,136	0	
871	Hungry Horse Dam	09/1993	09/2003	7.875%	2	0	
872	Hungry Horse Dam	09/1994	09/2019	7.125%	56	0	
873	Hungry Horse Dam	09/1995	09/2000	6.620%	156	0	
874	Hungry Horse Dam	09/1995	09/2000	6.620%	84	0	
875	Hungry Horse Dam	09/1995	09/2020	7.930%	450	0	
876	Hungry Horse Dam	09/1995	09/2030	7.150%	536	0	
877	Hungry Horse Dam	09/1995	09/2030	7.150%	1,198	0	
878	Hungry Horse Dam	09/1995	09/2045	7.150%	6,190	6,190	
879	Hungry Horse Dam	09/1995	09/2045	7.860%	14,354	0	
880	Hungry Horse Dam	09/1996	09/2046	7.150%	15	15	
881	Hungry Horse Dam	09/1996	09/2046	7.150%	2	2	
882	Hungry Horse Dam	09/1997	09/2007	6.950%	154	0	
883	Hungry Horse Dam	09/1997	09/2047	7.150%	111	111	
884	Hungry Horse Dam	09/2001	09/2051	5.875%	552	552	
885	Hungry Horse Dam	09/2005	09/2055	5.125%	2,951	2,951	
886	Hungry Horse Dam	09/2007	09/2057	5.000%	294	294	
887	Hungry Horse Dam	09/2008	09/2058	4.875%	76	76	
888	Hungry Horse Dam	09/2009	09/2059	4.375%	60	60	
889	Hungry Horse Dam	09/2010	09/2060	4.250%	779	779	
890	Hungry Horse Dam	09/2011	09/2061	3.750%	503	503	
891	Hungry Horse Dam	09/2012	09/2062	3.375%	3	3	
892	Hungry Horse Dam	09/2014	09/2064	3.875%	12	12	
893	Hungry Horse Dam	09/2015	09/2065	3.250%			
894	Ice Harbor	09/1962	09/2012	7.160%	664	0	
895	Ice Harbor	09/1962	09/2012	7.160%	59,699	0	
896	Ice Harbor	09/1963	09/2012	7.160%	46	0	
897	Ice Harbor	09/1963	09/2012	7.160%	1	0	
898	Ice Harbor	09/1964	09/2012	7.160%	46	0	
899	Ice Harbor	09/1964	09/2012	7.160%	1	0	
900	Ice Harbor	09/1965	09/2012	7.160%	46	0	
901	Ice Harbor	09/1965	09/2012	7.160%	1	0	
902	Ice Harbor	09/1966	09/2012	7.160%	46	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
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(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
903	Ice Harbor	09/1966	09/2012	7.160%	1	0	
904	Ice Harbor	09/1967	09/2012	7.160%	46	0	
905	Ice Harbor	09/1967	09/2012	7.160%	1	0	
906	Ice Harbor	09/1968	09/2012	7.160%	46	0	
907	Ice Harbor	09/1968	09/2012	7.160%	1	0	
908	Ice Harbor	09/1969	09/2012	7.160%	46	0	
909	Ice Harbor	09/1969	09/2012	7.160%	1	0	
910	Ice Harbor	09/1970	09/2012	7.160%	46	0	
911	Ice Harbor	09/1970	09/2012	7.160%	1	0	
912	Ice Harbor	09/1971	09/2012	7.160%	46	0	
913	Ice Harbor	09/1971	09/2012	7.160%	1	0	
914	Ice Harbor	09/1972	09/2012	7.160%	46	0	
915	Ice Harbor	09/1972	09/2012	7.160%	1	0	
916	Ice Harbor	09/1973	09/2012	7.160%	46	0	
917	Ice Harbor	09/1973	09/2012	7.160%	1	0	
918	Ice Harbor	09/1974	09/2012	7.160%	46	0	
919	Ice Harbor	09/1974	09/2012	7.160%	1	0	
920	Ice Harbor	09/1975	09/2012	7.160%	46	0	
921	Ice Harbor	09/1975	09/2012	7.160%	1	0	
922	Ice Harbor	09/1976	09/2012	7.160%	46	0	
923	Ice Harbor	09/1976	09/2012	7.160%	1	0	
924	Ice Harbor	09/1976	09/2026	7.150%	20,472	0	
925	Ice Harbor	09/1976	09/2026	7.150%	228	0	
926	Ice Harbor	09/1977	09/2012	7.160%	46	0	
927	Ice Harbor	09/1977	09/2012	7.160%	1	0	
928	Ice Harbor	09/1978	09/2012	7.160%	46	0	
929	Ice Harbor	09/1978	09/2012	7.160%	1	0	
930	Ice Harbor	09/1979	09/2012	7.160%	46	0	
931	Ice Harbor	09/1979	09/2012	7.160%	1	0	
932	Ice Harbor	09/1980	09/2012	7.160%	46	0	
933	Ice Harbor	09/1980	09/2012	7.160%	1	0	
934	Ice Harbor	09/1981	09/2012	7.160%	46	0	
935	Ice Harbor	09/1981	09/2012	7.160%	1	0	
936	Ice Harbor	09/1982	09/2012	7.160%	46	0	
937	Ice Harbor	09/1982	09/2012	7.160%	1	0	
938	Ice Harbor	09/1983	09/2012	7.160%	46	0	
939	Ice Harbor	09/1983	09/2012	7.160%	1	0	
940	Ice Harbor	09/1985	09/2012	7.160%	41	0	
941	Ice Harbor	09/1985	09/2026	7.150%	21	0	
942	Ice Harbor	09/1986	09/2012	7.160%	137	0	
943	Ice Harbor	09/1987	09/2012	7.160%	3	0	
944	Ice Harbor	09/1987	09/2012	8.875%	71	0	
945	Ice Harbor	09/1987	09/2012	8.875%	1	0	
946	Ice Harbor	09/1988	09/2012	8.500%	8	0	
947	Ice Harbor	09/1988	09/2012	8.500%	57	0	
948	Ice Harbor	09/1989	09/2012	9.250%	51	0	
949	Ice Harbor	09/1990	09/2012	8.875%	427	0	
950	Ice Harbor	09/1991	09/2012	8.750%	348	0	
951	Ice Harbor	09/1992	09/2012	8.500%	177	0	
952	Ice Harbor	09/1993	09/2012	7.875%	3,192	0	
953	Ice Harbor	09/1993	09/2012	7.875%	1,645	0	
954	Ice Harbor	09/1994	09/2029	7.125%	328	0	
955	Ice Harbor	09/1994	09/2029	7.125%	520	0	
956	Ice Harbor	09/1995	09/2000	7.330%	2	0	
957	Ice Harbor	09/1995	09/2019	7.270%	84	0	
958	Ice Harbor	09/1995	09/2019	7.270%	171	0	
959	Ice Harbor	09/1995	09/2019	7.270%	849	0	
960	Ice Harbor	09/1996	09/2031	7.150%	78	0	
961	Ice Harbor	09/1996	09/2041	7.150%	371	371	
962	Ice Harbor	09/1997	09/2022	7.230%	66	0	
963	Ice Harbor	09/1997	09/2047	7.150%	67	67	
964	Ice Harbor	09/1999	09/2049	5.375%	5,516	5,516	
965	Ice Harbor	09/2000	09/2050	6.125%	548	548	
966	Ice Harbor	09/2001	09/2051	5.875%	764	764	
967	Ice Harbor	09/2002	09/2052	5.500%	1,014	1,014	
968	Ice Harbor	09/2003	09/2053	5.125%	50	50	
969	Ice Harbor	09/2004	09/2054	5.375%	3,321	3,321	
970	Ice Harbor	09/2008	09/2058	4.875%	14	14	
971	Ice Harbor	09/2009	09/2059	4.375%	2,615	2,615	
972	Ice Harbor	09/2010	09/2060	4.250%	207	207	
973	Ice Harbor	09/2011	09/2061	3.750%	819	819	
974	Ice Harbor	09/2012	09/2062	3.375%	115	115	
975	Ice Harbor	09/2015	09/2065	3.250%	3,175	3,175	
976	Ice Harbor	09/2016	09/2066	3.000%	558	558	
977	John Day	09/1968	09/2018	7.280%	27,254	0	
978	John Day	09/1969	09/2019	7.270%	96,104	0	
979	John Day	09/1970	09/2020	7.250%	23,656	0	
980	John Day	09/1971	09/2021	7.230%	34,974	0	
981	John Day	09/1972	09/2022	7.210%	11,502	0	
982	John Day	09/1984	09/2022	10.750%	3,677	0	
983	John Day	09/1985	09/2022	7.210%	6,490	0	
984	John Day	09/1985	09/2022	12.375%	1,209	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
985	John Day	09/1986	09/2022	7.210%	3,227	0	
986	John Day	09/1986	09/2022	11.375%	713	0	
987	John Day	09/1987	09/2022	7.210%	706	0	
988	John Day	09/1987	09/2022	8.875%	4,353	0	
989	John Day	09/1988	09/2022	8.500%	332	0	
990	John Day	09/1988	09/2022	8.500%	199	0	
991	John Day	09/1989	09/2022	7.210%	30	0	
992	John Day	09/1989	09/2022	9.250%	377	0	
993	John Day	09/1990	09/2022	7.210%	37	0	
994	John Day	09/1990	09/2022	8.875%	543	0	
995	John Day	09/1991	09/2022	8.750%	13,218	0	
996	John Day	09/1991	09/2022	8.750%	144	0	
997	John Day	09/1992	09/2022	7.210%	19	0	
998	John Day	09/1992	09/2022	8.500%	95	0	
999	John Day	09/1993	09/2022	7.875%	7,810	0	
1000	John Day	09/1993	09/2022	7.875%	9,585	0	
1001	John Day	09/1994	09/2019	7.125%	14	0	
1002	John Day	09/1994	09/2029	7.125%	1,252	0	
1003	John Day	09/1995	09/2000	7.330%	2	0	
1004	John Day	09/1995	09/2000	7.330%	9	0	
1005	John Day	09/1995	09/2020	7.250%	79	0	
1006	John Day	09/1995	09/2035	7.150%	22	22	
1007	John Day	09/1995	09/2035	7.150%	52	52	
1008	John Day	09/1995	09/2035	7.150%	121	121	
1009	John Day	09/1995	09/2045	7.150%	37	37	
1010	John Day	09/1995	09/2045	7.150%	608	608	
1011	John Day	09/1995	09/2045	7.150%	7,653	7,653	
1012	John Day	09/1996	09/2011	7.130%	237	0	
1013	John Day	09/1996	09/2016	7.290%	1,072	0	
1014	John Day	09/1997	09/2022	7.230%	133	0	
1015	John Day	09/1997	09/2047	7.150%	179	179	
1016	John Day	09/1999	09/2049	5.375%	3,510	3,510	
1017	John Day	09/2000	09/2050	6.125%	2,761	2,761	
1018	John Day	09/2001	09/2051	5.875%	619	619	
1019	John Day	09/2004	09/2054	5.375%	2,830	2,830	
1020	John Day	09/2005	09/2055	5.125%	2,827	2,827	
1021	John Day	09/2006	09/2056	4.500%	601	601	
1022	John Day	09/2007	09/2057	5.000%	233	233	
1023	John Day	09/2009	09/2059	4.375%	1,548	1,548	
1024	John Day	09/2010	09/2060	4.250%	356	356	
1025	John Day	09/2011	09/2061	3.750%	175	175	
1026	John Day	09/2012	09/2062	3.375%	6,161	6,161	
1027	John Day	09/2013	09/2063	2.875%	17	17	
1028	John Day	09/2015	09/2065	3.250%	163	163	
1029	Libby	09/1975	09/2025	7.160%	54,644	0	
1030	Libby	09/1976	09/2026	7.150%	153,432	0	
1031	Libby	09/1977	09/2026	7.150%	1,465	0	
1032	Libby	09/1978	09/2026	7.150%	1,465	0	
1033	Libby	09/1979	09/2026	7.150%	1,465	0	
1034	Libby	09/1980	09/2026	7.150%	1,465	0	
1035	Libby	09/1981	09/2026	7.150%	1,465	0	
1036	Libby	09/1982	09/2026	7.150%	1,465	0	
1037	Libby	09/1983	09/2026	7.150%	1,465	0	
1038	Libby	09/1984	09/2026	10.750%	104	0	
1039	Libby	09/1985	09/2026	7.150%	518	0	
1040	Libby	09/1986	09/2026	7.150%	283	0	
1041	Libby	09/1987	09/2026	7.150%	2	0	
1042	Libby	09/1988	09/2026	8.505%	35	0	
1043	Libby	09/1988	09/2038	7.150%	18,043	14,781	
1044	Libby	09/1989	09/2026	7.150%	1	0	
1045	Libby	09/1989	09/2026	9.250%	131	0	
1046	Libby	09/1990	09/2026	8.875%	11	0	
1047	Libby	09/1991	09/2026	8.750%	134	0	
1048	Libby	09/1992	09/2026	8.500%	100	0	
1049	Libby	09/1992	09/2026	8.500%	70	0	
1050	Libby	09/1993	09/2026	7.875%	600	0	
1051	Libby	09/1994	09/2029	7.125%	215	0	
1052	Libby	09/1994	09/2029	7.150%	286	0	
1053	Libby	09/1995	09/2030	7.150%	15	0	
1054	Libby	09/1995	09/2030	7.150%	41	0	
1055	Libby	09/1995	09/2030	7.150%	94	0	
1056	Libby	09/1997	09/2022	7.230%	432	0	
1057	Libby	09/1997	09/2047	7.150%	660	660	
1058	Libby	09/2001	09/2051	5.875%	5,562	5,562	
1059	Libby	09/2008	09/2058	4.875%	1,567	1,567	
1060	Libby	09/2010	09/2060	4.250%	40	40	
1061	Libby	09/2011	09/2061	3.750%	152	152	
1062	Libby	09/2012	09/2062	3.375%	16	16	
1063	Little Goose	09/1970	09/2020	7.250%	22,326	0	
1064	Little Goose	09/1971	09/2021	7.230%	42,962	0	
1065	Little Goose	09/1972	09/2021	7.230%	28	0	
1066	Little Goose	09/1973	09/2021	7.230%	29	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1067	Little Goose	09/1974	09/2021	7.230%	28	0	
1068	Little Goose	09/1975	09/2021	7.230%	29	0	
1069	Little Goose	09/1976	09/2021	7.230%	28	0	
1070	Little Goose	09/1977	09/2021	7.230%	29	0	
1071	Little Goose	09/1978	09/2021	7.230%	28	0	
1072	Little Goose	09/1978	09/2028	7.150%	49,578	0	
1073	Little Goose	09/1979	09/2021	7.230%	29	0	
1074	Little Goose	09/1980	09/2021	7.230%	28	0	
1075	Little Goose	09/1981	09/2021	7.230%	29	0	
1076	Little Goose	09/1982	09/2021	7.230%	28	0	
1077	Little Goose	09/1983	09/2021	7.230%	29	0	
1078	Little Goose	09/1984	09/2021	10.750%	201	0	
1079	Little Goose	09/1985	09/2021	7.230%	174	0	
1080	Little Goose	09/1985	09/2028	7.150%	47	0	
1081	Little Goose	09/1986	09/2021	7.230%	239	0	
1082	Little Goose	09/1987	09/2021	7.230%	6	0	
1083	Little Goose	09/1987	09/2021	8.875%	72	0	
1084	Little Goose	09/1988	09/2021	8.500%	12	0	
1085	Little Goose	09/1988	09/2021	8.500%	68	0	
1086	Little Goose	09/1989	09/2021	9.250%	77	0	
1087	Little Goose	09/1990	09/2021	8.875%	408	0	
1088	Little Goose	09/1990	09/2021	8.875%	21	0	
1089	Little Goose	09/1991	09/2021	8.750%	266	0	
1090	Little Goose	09/1992	09/2021	8.500%	66	0	
1091	Little Goose	09/1992	09/2021	8.500%	27	0	
1092	Little Goose	09/1993	09/2021	7.875%	276	0	
1093	Little Goose	09/1993	09/2021	7.875%	3,359	0	
1094	Little Goose	09/1994	09/2019	7.125%	37	0	
1095	Little Goose	09/1994	09/2029	7.125%	2,044	0	
1096	Little Goose	09/1995	09/2040	7.150%	17	17	
1097	Little Goose	09/1995	09/2040	7.150%	450	450	
1098	Little Goose	09/1995	09/2040	7.150%	733	733	
1099	Little Goose	09/1996	09/2046	7.150%	10	10	
1100	Little Goose	09/1996	09/2046	7.150%	10	10	
1101	Little Goose	09/1996	09/2046	7.150%	211	211	
1102	Little Goose	09/1996	09/2046	7.150%	241	241	
1103	Little Goose	09/1996	09/2046	7.150%	520	520	
1104	Little Goose	09/1996	09/2046	7.150%	3,909	3,909	
1105	Little Goose	09/1997	09/2047	7.150%	1	1	
1106	Little Goose	09/2001	09/2051	5.875%	4,608	4,608	
1107	Little Goose	09/2002	09/2052	5.500%	27	27	
1108	Little Goose	09/2003	09/2053	5.125%	146	146	
1109	Little Goose	09/2004	09/2054	5.375%	67	67	
1110	Little Goose	09/2008	09/2058	4.875%	13	13	
1111	Little Goose	09/2009	09/2059	4.375%	3,171	3,171	
1112	Little Goose	09/2010	09/2060	4.250%	30	30	
1113	Little Goose	09/2013	09/2063	2.875%	66	66	
1114	Lookout Dam	09/1955	09/2005	6.910%	34,290	0	
1115	Lookout Dam	09/1956	09/2005	6.910%	52	0	
1116	Lookout Dam	09/1957	09/2005	6.910%	51	0	
1117	Lookout Dam	09/1958	09/2005	6.910%	51	0	
1118	Lookout Dam	09/1959	09/2005	6.910%	51	0	
1119	Lookout Dam	09/1960	09/2005	6.910%	51	0	
1120	Lookout Dam	09/1961	09/2005	6.910%	52	0	
1121	Lookout Dam	09/1962	09/2005	6.910%	51	0	
1122	Lookout Dam	09/1963	09/2005	6.910%	51	0	
1123	Lookout Dam	09/1964	09/2005	6.910%	51	0	
1124	Lookout Dam	09/1965	09/2005	6.910%	51	0	
1125	Lookout Dam	09/1966	09/2005	6.910%	51	0	
1126	Lookout Dam	09/1967	09/2005	6.910%	52	0	
1127	Lookout Dam	09/1968	09/2005	6.910%	51	0	
1128	Lookout Dam	09/1969	09/2005	6.910%	51	0	
1129	Lookout Dam	09/1970	09/2005	6.910%	51	0	
1130	Lookout Dam	09/1971	09/2005	6.910%	51	0	
1131	Lookout Dam	09/1972	09/2005	6.910%	51	0	
1132	Lookout Dam	09/1973	09/2005	6.910%	52	0	
1133	Lookout Dam	09/1974	09/2005	6.910%	51	0	
1134	Lookout Dam	09/1975	09/2005	6.910%	51	0	
1135	Lookout Dam	09/1976	09/2005	6.910%	51	0	
1136	Lookout Dam	09/1977	09/2005	6.910%	51	0	
1137	Lookout Dam	09/1978	09/2005	6.910%	51	0	
1138	Lookout Dam	09/1979	09/2005	6.910%	52	0	
1139	Lookout Dam	09/1980	09/2005	6.910%	51	0	
1140	Lookout Dam	09/1981	09/2005	6.910%	51	0	
1141	Lookout Dam	09/1982	09/2005	6.910%	51	0	
1142	Lookout Dam	09/1983	09/2005	6.910%	51	0	
1143	Lookout Dam	09/1984	09/2005	10.750%	185	0	
1144	Lookout Dam	09/1985	09/2005	6.910%	52	0	
1145	Lookout Dam	09/1986	09/2005	6.910%	42	0	
1146	Lookout Dam	09/1987	09/2005	6.910%	9	0	
1147	Lookout Dam	09/1987	09/2005	8.875%	12	0	
1148	Lookout Dam	09/1988	09/2005	8.500%	46	0	

**TABLE 11A:
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1149	Lookout Dam	09/1988	09/2005	8.500%	17	0	
1150	Lookout Dam	09/1989	09/2005	9.250%	23	0	
1151	Lookout Dam	09/1990	09/2005	8.875%	147	0	
1152	Lookout Dam	09/1990	09/2005	8.875%	4	0	
1153	Lookout Dam	09/1991	09/2005	8.750%	6	0	
1154	Lookout Dam	09/1991	09/2005	8.750%	50	0	
1155	Lookout Dam	09/1992	09/2005	8.500%	181	0	
1156	Lookout Dam	09/1992	09/2005	8.500%	4	0	
1157	Lookout Dam	09/1993	09/2005	7.875%	18	0	
1158	Lookout Dam	09/1993	09/2005	7.875%	189	0	
1159	Lookout Dam	09/1994	09/2019	7.125%	73	0	
1160	Lookout Dam	09/1995	09/2045	7.150%	80	39	
1161	Lookout Dam	09/1995	09/2045	7.150%	33	33	
1162	Lookout Dam	09/1995	09/2045	7.860%	9	0	
1163	Lookout Dam	09/1995	09/2045	7.860%	15	0	
1164	Lookout Dam	09/1995	09/2045	7.860%	31	0	
1165	Lookout Dam	09/1995	09/2045	7.860%	157	0	
1166	Lookout Dam	09/2000	09/2050	6.125%	5,098	5,098	
1167	Lookout Dam	09/2003	09/2053	5.125%	135	135	
1168	Lookout Dam	09/2005	09/2055	5.125%	7,355	7,355	
1169	Lookout Dam	09/2007	09/2057	5.000%	572	572	
1170	Lookout Dam	09/2011	09/2061	3.750%	17	17	
1171	Lookout Dam	09/2012	09/2062	3.375%	294	294	
1172	Lost Creek	09/1977	09/2027	7.150%	14,293	0	
1173	Lost Creek	09/1978	09/2027	7.150%	58	0	
1174	Lost Creek	09/1979	09/2027	7.150%	60	0	
1175	Lost Creek	09/1980	09/2027	7.150%	60	0	
1176	Lost Creek	09/1981	09/2027	7.150%	60	0	
1177	Lost Creek	09/1982	09/2027	7.150%	60	0	
1178	Lost Creek	09/1983	09/2027	7.150%	60	0	
1179	Lost Creek	09/1984	09/2027	10.750%	243	0	
1180	Lost Creek	09/1985	09/2027	7.150%	12	0	
1181	Lost Creek	09/1986	09/2027	7.150%	6	0	
1182	Lost Creek	09/1986	09/2027	11.375%	5	0	
1183	Lost Creek	09/1987	09/2027	7.150%	4	0	
1184	Lost Creek	09/1987	09/2027	8.875%	3	0	
1185	Lost Creek	09/1988	09/2027	8.500%	7	0	
1186	Lost Creek	09/1989	09/2027	9.250%	9	0	
1187	Lost Creek	09/1990	09/2027	8.875%	1	0	
1188	Lost Creek	09/1991	09/2027	8.750%	31	0	
1189	Lost Creek	09/1992	09/2027	8.500%	1	0	
1190	Lost Creek	09/1992	09/2027	8.500%	1	0	
1191	Lost Creek	09/1993	09/2027	7.875%	1	0	
1192	Lost Creek	09/1993	09/2027	7.875%	14	0	
1193	Lost Creek	09/1995	09/2000	7.330%	4	0	
1194	Lost Creek	09/1995	09/2045	7.150%	94	94	
1195	Lost Creek	09/1996	09/2031	7.150%	31	0	
1196	Lost Creek	09/1996	09/2046	7.150%	24	24	
1197	Lost Creek	09/2001	09/2051	5.875%	147	147	
1198	Lost Creek	09/2011	09/2061	3.750%	7	7	
1199	Lower Granite	09/1975	09/2025	7.160%	119,237	0	
1200	Lower Granite	09/1976	09/2025	7.160%	510	0	
1201	Lower Granite	09/1977	09/2025	7.160%	510	0	
1202	Lower Granite	09/1978	09/2025	7.160%	510	0	
1203	Lower Granite	09/1978	09/2028	7.150%	40,611	0	
1204	Lower Granite	09/1979	09/2025	7.160%	510	0	
1205	Lower Granite	09/1980	09/2025	7.160%	510	0	
1206	Lower Granite	09/1981	09/2025	7.160%	510	0	
1207	Lower Granite	09/1982	09/2025	7.160%	510	0	
1208	Lower Granite	09/1983	09/2025	7.160%	510	0	
1209	Lower Granite	09/1984	09/2025	10.750%	311	0	
1210	Lower Granite	09/1985	09/2025	7.160%	328	0	
1211	Lower Granite	09/1986	09/2025	7.160%	215	0	
1212	Lower Granite	09/1986	09/2025	11.375%	4	0	
1213	Lower Granite	09/1987	09/2025	7.160%	8	0	
1214	Lower Granite	09/1987	09/2025	8.875%	60	0	
1215	Lower Granite	09/1988	09/2025	8.500%	22	0	
1216	Lower Granite	09/1988	09/2025	8.500%	95	0	
1217	Lower Granite	09/1989	09/2025	9.250%	112	0	
1218	Lower Granite	09/1990	09/2025	8.875%	392	0	
1219	Lower Granite	09/1991	09/2025	8.750%	281	0	
1220	Lower Granite	09/1991	09/2025	8.750%	6	0	
1221	Lower Granite	09/1992	09/2025	8.500%	83	0	
1222	Lower Granite	09/1992	09/2025	8.500%	121	0	
1223	Lower Granite	09/1993	09/2025	7.875%	26	0	
1224	Lower Granite	09/1993	09/2025	7.875%	3,272	0	
1225	Lower Granite	09/1994	09/2019	7.125%	38	0	
1226	Lower Granite	09/1994	09/2029	7.150%	3,543	0	
1227	Lower Granite	09/1995	09/2017	7.290%	77	0	
1228	Lower Granite	09/1995	09/2017	7.290%	388	0	
1229	Lower Granite	09/1995	09/2017	7.290%	458	0	
1230	Lower Granite	09/1995	09/2025	7.160%	96	0	

**TABLE 11A:
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1231	Lower Granite	09/1996	09/2011	7.130%	255	0	
1232	Lower Granite	09/1996	09/2031	7.150%	206	0	
1233	Lower Granite	09/1996	09/2046	7.150%	9	9	
1234	Lower Granite	09/1996	09/2046	7.150%	625	625	
1235	Lower Granite	09/1997	09/2047	7.150%	677	677	
1236	Lower Granite	09/1999	09/2049	5.375%	856	856	
1237	Lower Granite	09/2001	09/2051	5.875%	2,025	2,025	
1238	Lower Granite	09/2002	09/2052	5.500%	1,275	1,275	
1239	Lower Granite	09/2003	09/2053	5.125%	42	42	
1240	Lower Granite	09/2005	09/2055	5.125%	393	393	
1241	Lower Granite	09/2008	09/2058	4.875%	24	24	
1242	Lower Granite	09/2009	09/2059	4.375%	5,669	5,669	
1243	Lower Granite	09/2010	09/2060	4.250%	1,156	1,156	
1244	Lower Granite	09/2011	09/2061	3.750%	8	8	
1245	Lower Granite	09/2014	09/2064	3.875%	2,644	2,644	
1246	Lower Granite	09/2015	09/2065	3.250%	1,597	1,597	
1247	Lower Granite	09/2016	09/2066	3.000%	1,878	1,878	
1248	Lower Monument	09/1969	09/2019	7.270%	26,974	0	
1249	Lower Monument	09/1970	09/2020	7.250%	51,218	0	
1250	Lower Monument	09/1971	09/2020	7.250%	214	0	
1251	Lower Monument	09/1972	09/2020	7.250%	214	0	
1252	Lower Monument	09/1973	09/2020	7.250%	214	0	
1253	Lower Monument	09/1974	09/2020	7.250%	214	0	
1254	Lower Monument	09/1975	09/2020	7.250%	214	0	
1255	Lower Monument	09/1976	09/2020	7.250%	214	0	
1256	Lower Monument	09/1977	09/2020	7.250%	214	0	
1257	Lower Monument	09/1978	09/2020	7.250%	214	0	
1258	Lower Monument	09/1979	09/2020	7.250%	214	0	
1259	Lower Monument	09/1979	09/2029	7.150%	40,669	0	
1260	Lower Monument	09/1980	09/2020	7.250%	214	0	
1261	Lower Monument	09/1981	09/2020	7.250%	214	0	
1262	Lower Monument	09/1982	09/2020	7.250%	214	0	
1263	Lower Monument	09/1983	09/2020	7.250%	214	0	
1264	Lower Monument	09/1985	09/2020	7.250%	8	0	
1265	Lower Monument	09/1985	09/2029	7.150%	256	0	
1266	Lower Monument	09/1986	09/2020	7.250%	132	0	
1267	Lower Monument	09/1987	09/2020	7.250%	3	0	
1268	Lower Monument	09/1987	09/2020	8.875%	50	0	
1269	Lower Monument	09/1988	09/2020	8.500%	1	0	
1270	Lower Monument	09/1988	09/2020	8.500%	58	0	
1271	Lower Monument	09/1989	09/2020	9.250%	93	0	
1272	Lower Monument	09/1990	09/2020	8.875%	358	0	
1273	Lower Monument	09/1991	09/2020	8.750%	594	0	
1274	Lower Monument	09/1992	09/2020	8.500%	4,484	0	
1275	Lower Monument	09/1993	09/2020	7.875%	24	0	
1276	Lower Monument	09/1993	09/2020	7.875%	2,175	0	
1277	Lower Monument	09/1994	09/2019	7.125%	107	0	
1278	Lower Monument	09/1994	09/2029	7.125%	2,167	0	
1279	Lower Monument	09/1995	09/2000	7.330%	6	0	
1280	Lower Monument	09/1995	09/2045	7.150%	41	41	
1281	Lower Monument	09/1995	09/2045	7.150%	99	99	
1282	Lower Monument	09/1995	09/2045	7.150%	624	624	
1283	Lower Monument	09/1995	09/2045	7.150%	1,122	1,122	
1284	Lower Monument	09/1996	09/2016	7.290%	668	0	
1285	Lower Monument	09/1996	09/2021	7.230%	37	0	
1286	Lower Monument	09/1996	09/2021	7.230%	51	0	
1287	Lower Monument	09/1996	09/2036	7.150%	264	264	
1288	Lower Monument	09/1996	09/2046	7.150%	10	10	
1289	Lower Monument	09/2001	09/2051	5.875%	3,301	3,301	
1290	Lower Monument	09/2002	09/2052	5.500%	29	29	
1291	Lower Monument	09/2003	09/2053	5.125%	22	22	
1292	Lower Monument	09/2004	09/2054	5.375%	3,423	3,423	
1293	Lower Monument	09/2005	09/2055	5.125%	527	527	
1294	Lower Monument	09/2006	09/2056	4.500%	285	285	
1295	Lower Monument	09/2008	09/2058	4.875%	9	9	
1296	Lower Monument	09/2009	09/2059	4.375%	2,332	2,332	
1297	Lower Monument	09/2012	09/2062	3.375%	89	89	
1298	Lower Monument	09/2014	09/2064	3.875%	1,430	1,430	
1299	Lower Monument	09/2016	09/2066	3.000%	155	155	
1300	Lower Snake Fish and Wildlife	09/1983	09/2033	7.150%	30,488	9,472	
1301	Lower Snake Fish and Wildlife	09/1985	09/2035	7.150%	47,921	47,921	
1302	Lower Snake Fish and Wildlife	09/1987	09/2037	7.150%	72,536	72,536	
1303	Lower Snake Fish and Wildlife	09/1988	09/2038	7.150%	805	805	
1304	Lower Snake Fish and Wildlife	09/1990	09/2040	7.150%	1,557	1,557	
1305	Lower Snake Fish and Wildlife	09/1991	09/2041	7.150%	4,411	4,411	
1306	Lower Snake Fish and Wildlife	09/1993	09/2043	7.150%	71,632	71,632	
1307	Lower Snake Fish and Wildlife	09/1994	09/2044	7.150%	4,722	4,722	
1308	Lower Snake Fish and Wildlife	09/1996	09/2046	7.150%	12,085	12,085	
1309	Lower Snake Fish and Wildlife	09/1997	09/2047	7.150%	2,173	2,173	
1310	Lower Snake Fish and Wildlife	09/1999	09/2049	5.375%	7	7	
1311	Lower Snake Fish and Wildlife	09/2000	09/2050	6.125%	1,529	1,529	
1312	Lower Snake Fish and Wildlife	09/2001	09/2051	5.875%	325	325	

**TABLE 11A:
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1313	Lower Snake Fish and Wildlife	09/2002	09/2052	5.500%	890	890	
1314	Lower Snake Fish and Wildlife	09/2003	09/2053	5.125%	98	98	
1315	Lower Snake Fish and Wildlife	09/2004	09/2054	5.375%	230	230	
1316	Lower Snake Fish and Wildlife	09/2005	09/2055	5.125%	4	4	
1317	Lower Snake Fish and Wildlife	09/2006	09/2056	4.500%	379	379	
1318	Lower Snake Fish and Wildlife	09/2008	09/2058	4.875%	74	74	
1319	Lower Snake Fish and Wildlife	09/2009	09/2059	4.375%	1,540	1,540	
1320	Lower Snake Fish and Wildlife	09/2010	09/2060	4.250%	6	6	
1321	Lower Snake Fish and Wildlife	09/2011	09/2061	3.750%	122	122	
1322	Lower Snake Fish and Wildlife	09/2014	09/2064	3.875%	222	222	
1323	Lower Snake Fish and Wildlife	09/2016	09/2066	3.000%	1,256	1,256	
1324	McNary	09/1954	09/2004	6.880%	80,256	0	
1325	McNary	09/1955	09/2005	6.910%	53,493	0	
1326	McNary	09/1956	09/2006	6.950%	38,748	0	
1327	McNary	09/1957	09/2007	6.980%	24,985	0	
1328	McNary	09/1958	09/2007	6.980%	468	0	
1329	McNary	09/1959	09/2007	6.980%	468	0	
1330	McNary	09/1960	09/2007	6.980%	468	0	
1331	McNary	09/1961	09/2007	6.980%	468	0	
1332	McNary	09/1962	09/2007	6.980%	467	0	
1333	McNary	09/1963	09/2007	6.980%	468	0	
1334	McNary	09/1964	09/2007	6.980%	468	0	
1335	McNary	09/1965	09/2007	6.980%	468	0	
1336	McNary	09/1966	09/2007	6.980%	468	0	
1337	McNary	09/1967	09/2007	6.980%	467	0	
1338	McNary	09/1968	09/2007	6.980%	468	0	
1339	McNary	09/1969	09/2007	6.980%	468	0	
1340	McNary	09/1970	09/2007	6.980%	468	0	
1341	McNary	09/1971	09/2007	6.980%	468	0	
1342	McNary	09/1972	09/2007	6.980%	468	0	
1343	McNary	09/1973	09/2007	6.980%	467	0	
1344	McNary	09/1974	09/2007	6.980%	468	0	
1345	McNary	09/1975	09/2007	6.980%	468	0	
1346	McNary	09/1976	09/2007	6.980%	468	0	
1347	McNary	09/1977	09/2007	6.980%	467	0	
1348	McNary	09/1978	09/2007	6.980%	468	0	
1349	McNary	09/1979	09/2007	6.980%	468	0	
1350	McNary	09/1980	09/2007	6.980%	468	0	
1351	McNary	09/1981	09/2007	6.980%	468	0	
1352	McNary	09/1982	09/2007	6.980%	467	0	
1353	McNary	09/1983	09/2007	6.980%	468	0	
1354	McNary	09/1985	09/2007	6.980%	557	0	
1355	McNary	09/1986	09/2007	6.980%	454	0	
1356	McNary	09/1987	09/2007	6.980%	24	0	
1357	McNary	09/1995	09/2010	7.090%	509	0	
1358	McNary	09/1995	09/2045	7.150%	16	16	
1359	McNary	09/1996	09/2006	6.950%	778	0	
1360	McNary	09/1996	09/2011	7.130%	3	0	
1361	McNary	09/1996	09/2026	7.150%	74	0	
1362	McNary	09/1996	09/2026	7.150%	277	0	
1363	McNary	09/1996	09/2046	7.150%	619	619	
1364	McNary	09/1997	09/2032	7.150%	30	0	
1365	McNary	09/2001	09/2051	5.875%	1,046	1,046	
1366	McNary	09/2003	09/2053	5.125%	97	97	
1367	McNary	09/2004	09/2054	5.375%	6,138	6,138	
1368	McNary	09/2005	09/2055	5.125%	550	550	
1369	McNary	09/2006	09/2056	4.500%	4,080	4,080	
1370	McNary	09/2008	09/2058	4.875%	215	215	
1371	McNary	09/2011	09/2061	3.750%	565	565	
1372	McNary	09/2012	09/2062	3.375%	11	11	
1373	McNary	09/2013	09/2063	2.875%	1,000	1,000	
1374	McNary	09/2014	09/2064	3.875%	759	759	
1375	Minidoka/Palisades	09/1909	09/1959	3.000%	854	0	
1376	Minidoka/Palisades	09/1909	09/1959	3.000%	226	0	
1377	Minidoka/Palisades	09/1910	09/1960	3.000%	1,709	0	
1378	Minidoka/Palisades	09/1910	09/1960	3.000%	451	0	
1379	Minidoka/Palisades	09/1911	09/1961	3.000%	1,709	0	
1380	Minidoka/Palisades	09/1911	09/1961	3.000%	451	0	
1381	Minidoka/Palisades	09/1927	09/1977	3.000%	854	0	
1382	Minidoka/Palisades	09/1927	09/1977	3.000%	226	0	
1383	Minidoka/Palisades	09/1942	09/1992	3.000%	854	0	
1384	Minidoka/Palisades	09/1942	09/1992	3.000%	226	0	
1385	Minidoka/Palisades	09/1957	09/2007	3.000%	2,561	0	
1386	Minidoka/Palisades	09/1957	09/2007	3.000%	677	0	
1387	Minidoka/Palisades	09/1958	09/2008	3.000%	854	0	
1388	Minidoka/Palisades	09/1958	09/2008	3.000%	226	0	
1389	Minidoka/Palisades	09/1959	09/2008	3.000%	108	0	
1390	Minidoka/Palisades	09/1959	09/2008	3.000%	28	0	
1391	Minidoka/Palisades	09/1960	09/2008	3.000%	108	0	
1392	Minidoka/Palisades	09/1960	09/2008	3.000%	29	0	
1393	Minidoka/Palisades	09/1961	09/2008	3.000%	108	0	
1394	Minidoka/Palisades	09/1961	09/2008	3.000%	29	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1395	Minidoka/Palisades	09/1962	09/2008	3.000%	108	0		
1396	Minidoka/Palisades	09/1962	09/2008	3.000%	28	0		
1397	Minidoka/Palisades	09/1963	09/2008	3.000%	108	0		
1398	Minidoka/Palisades	09/1963	09/2008	3.000%	29	0		
1399	Minidoka/Palisades	09/1964	09/2008	3.000%	108	0		
1400	Minidoka/Palisades	09/1964	09/2008	3.000%	28	0		
1401	Minidoka/Palisades	09/1965	09/2008	3.000%	108	0		
1402	Minidoka/Palisades	09/1965	09/2008	3.000%	29	0		
1403	Minidoka/Palisades	09/1966	09/2008	3.000%	108	0		
1404	Minidoka/Palisades	09/1966	09/2008	3.000%	29	0		
1405	Minidoka/Palisades	09/1967	09/2008	3.000%	108	0		
1406	Minidoka/Palisades	09/1967	09/2008	3.000%	28	0		
1407	Minidoka/Palisades	09/1968	09/2008	3.000%	108	0		
1408	Minidoka/Palisades	09/1968	09/2008	3.000%	29	0		
1409	Minidoka/Palisades	09/1969	09/2008	3.000%	3	0		
1410	Minidoka/Palisades	09/1969	09/2008	3.000%	28	0		
1411	Minidoka/Palisades	09/1970	09/2008	3.000%	108	0		
1412	Minidoka/Palisades	09/1970	09/2008	3.000%	29	0		
1413	Minidoka/Palisades	09/1971	09/2008	3.000%	108	0		
1414	Minidoka/Palisades	09/1971	09/2008	3.000%	29	0		
1415	Minidoka/Palisades	09/1972	09/2008	3.000%	108	0		
1416	Minidoka/Palisades	09/1972	09/2008	3.000%	28	0		
1417	Minidoka/Palisades	09/1973	09/2008	3.000%	108	0		
1418	Minidoka/Palisades	09/1973	09/2008	3.000%	29	0		
1419	Minidoka/Palisades	09/1974	09/2008	3.000%	108	0		
1420	Minidoka/Palisades	09/1974	09/2008	3.000%	28	0		
1421	Minidoka/Palisades	09/1975	09/2008	3.000%	108	0		
1422	Minidoka/Palisades	09/1975	09/2008	3.000%	29	0		
1423	Minidoka/Palisades	09/1976	09/2008	3.000%	108	0		
1424	Minidoka/Palisades	09/1976	09/2008	3.000%	29	0		
1425	Minidoka/Palisades	09/1977	09/2008	7.020%	83	0		
1426	Minidoka/Palisades	09/1977	09/2008	7.020%	28	0		
1427	Minidoka/Palisades	09/1978	09/2008	7.020%	75	0		
1428	Minidoka/Palisades	09/1978	09/2008	7.020%	20	0		
1429	Minidoka/Palisades	09/1979	09/2008	7.020%	75	0		
1430	Minidoka/Palisades	09/1979	09/2008	7.020%	19	0		
1431	Minidoka/Palisades	09/1980	09/2008	7.020%	75	0		
1432	Minidoka/Palisades	09/1980	09/2008	7.020%	20	0		
1433	Minidoka/Palisades	09/1981	09/2008	7.020%	75	0		
1434	Minidoka/Palisades	09/1981	09/2008	7.020%	20	0		
1435	Minidoka/Palisades	09/1982	09/2008	7.020%	75	0		
1436	Minidoka/Palisades	09/1982	09/2008	7.020%	19	0		
1437	Minidoka/Palisades	09/1983	09/2008	7.020%	65	0		
1438	Minidoka/Palisades	09/1983	09/2008	7.020%	20	0		
1439	Minidoka/Palisades	09/1984	09/2008	10.075%	44	0		
1440	Minidoka/Palisades	09/1984	09/2008	10.075%	11	0		
1441	Minidoka/Palisades	09/1985	09/2008	7.020%	21	0		
1442	Minidoka/Palisades	09/1986	09/2008	7.020%	21	0		
1443	Minidoka/Palisades	09/1986	09/2008	11.375%	48	0		
1444	Minidoka/Palisades	09/1987	09/2008	7.020%	16	0		
1445	Minidoka/Palisades	09/1988	09/2008	8.500%	31	0		
1446	Minidoka/Palisades	09/1989	09/2008	9.250%	20	0		
1447	Minidoka/Palisades	09/1990	09/2008	8.875%	33	0		
1448	Minidoka/Palisades	09/1991	09/2008	8.750%	62	0		
1449	Minidoka/Palisades	09/1991	09/2008	8.750%	11	0		
1450	Minidoka/Palisades	09/1991	09/2008	8.750%	32	0		
1451	Minidoka/Palisades	09/1992	09/2008	8.500%	6	0		
1452	Minidoka/Palisades	09/1994	09/2029	7.125%	351	0		
1453	Minidoka/Palisades	09/1995	09/2000	7.330%	6	0		
1454	Minidoka/Palisades	09/1995	09/2010	7.890%	40	0		
1455	Minidoka/Palisades	09/1996	09/2011	7.130%	54	0		
1456	Minidoka/Palisades	09/1997	09/2007	6.950%	66	0		
1457	Minidoka/Palisades	09/1997	09/2047	7.150%	50,911	50,911		
1458	Minidoka/Palisades	09/2001	09/2051	5.875%	42	42		
1459	Minidoka/Palisades	09/2012	09/2062	3.375%	7	7		
1460	Minidoka/Palisades	09/2015	09/2065	3.250%	19,237	19,237		
1461	Minidoka/Palisades	09/2016	09/2066	3.000%	206	206		
1462	RRP - Green Springs	09/2001	09/2051	5.875%	11,145	11,145		
1463	RRP - Green Springs	09/2012	09/2062	3.375%	2	2		
1464	RRP - Green Springs	09/2013	09/2063	2.875%	1	1		
1465	The Dalles	09/1957	09/2007	2.500%	15,908	0		
1466	The Dalles	09/1958	09/2008	7.020%	45,837	0		
1467	The Dalles	09/1959	09/2009	7.060%	40,415	0		
1468	The Dalles	09/1960	09/2010	7.090%	39,179	0		
1469	The Dalles	09/1961	09/2011	7.130%	9,492	0		
1470	The Dalles	09/1962	09/2011	7.130%	56	0		
1471	The Dalles	09/1963	09/2011	7.130%	57	0		
1472	The Dalles	09/1964	09/2011	7.130%	57	0		
1473	The Dalles	09/1965	09/2011	7.130%	56	0		
1474	The Dalles	09/1966	09/2011	7.130%	57	0		
1475	The Dalles	09/1967	09/2011	7.130%	57	0		
1476	The Dalles	09/1968	09/2011	7.130%	56	0		

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1477	The Dalles	09/1969	09/2011	7.130%	57	0	
1478	The Dalles	09/1970	09/2011	7.130%	57	0	
1479	The Dalles	09/1971	09/2011	7.130%	56	0	
1480	The Dalles	09/1972	09/2011	7.130%	57	0	
1481	The Dalles	09/1973	09/2011	7.130%	57	0	
1482	The Dalles	09/1973	09/2023	7.190%	21,983	0	
1483	The Dalles	09/1974	09/2011	7.130%	56	0	
1484	The Dalles	09/1974	09/2024	7.170%	7,268	0	
1485	The Dalles	09/1975	09/2011	7.130%	57	0	
1486	The Dalles	09/1976	09/2011	7.130%	57	0	
1487	The Dalles	09/1977	09/2011	7.130%	56	0	
1488	The Dalles	09/1978	09/2011	7.130%	57	0	
1489	The Dalles	09/1979	09/2011	7.130%	57	0	
1490	The Dalles	09/1980	09/2011	7.130%	56	0	
1491	The Dalles	09/1981	09/2011	7.130%	57	0	
1492	The Dalles	09/1982	09/2011	7.130%	57	0	
1493	The Dalles	09/1983	09/2011	7.130%	56	0	
1494	The Dalles	09/1984	09/2011	10.750%	961	0	
1495	The Dalles	09/1985	09/2011	7.130%	95	0	
1496	The Dalles	09/1985	09/2011	12.375%	280	0	
1497	The Dalles	09/1986	09/2011	7.130%	95	0	
1498	The Dalles	09/1986	09/2011	11.375%	4	0	
1499	The Dalles	09/1987	09/2011	7.130%	1,417	0	
1500	The Dalles	09/1987	09/2011	8.875%	81	0	
1501	The Dalles	09/1988	09/2011	8.500%	685	0	
1502	The Dalles	09/1988	09/2011	8.500%	1	0	
1503	The Dalles	09/1989	09/2011	9.250%	898	0	
1504	The Dalles	09/1990	09/2011	8.875%	319	0	
1505	The Dalles	09/1990	09/2011	8.875%	745	0	
1506	The Dalles	09/1991	09/2011	8.750%	89	0	
1507	The Dalles	09/1991	09/2011	8.750%	2,452	0	
1508	The Dalles	09/1992	09/2011	8.500%	57	0	
1509	The Dalles	09/1992	09/2011	8.500%	130	0	
1510	The Dalles	09/1993	09/2011	7.875%	2,028	0	
1511	The Dalles	09/1993	09/2011	7.875%	2,929	0	
1512	The Dalles	09/1994	09/2029	7.125%	1,425	0	
1513	The Dalles	09/1996	09/2008	7.020%	196	0	
1514	The Dalles	09/1996	09/2011	7.130%	457	0	
1515	The Dalles	09/1996	09/2046	7.150%	1,991	1,991	
1516	The Dalles	09/2000	09/2050	6.125%	2,588	2,588	
1517	The Dalles	09/2002	09/2052	5.500%	1,226	1,226	
1518	The Dalles	09/2004	09/2054	5.375%	182	182	
1519	The Dalles	09/2005	09/2055	5.125%	36,019	36,019	
1520	The Dalles	09/2006	09/2056	4.500%	2,030	2,030	
1521	The Dalles	09/2007	09/2057	5.000%	140	140	
1522	The Dalles	09/2008	09/2058	4.875%	1,651	1,651	
1523	The Dalles	09/2015	09/2065	3.250%	302	302	
1524	The Dalles	09/2016	09/2066	3.000%	4	4	
1525	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	1,068	0	
1526	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	481	0	
1527	Yakima Chandler/Kenniwick	09/1959	09/2022	7.210%	1	0	
1528	Yakima Chandler/Kenniwick	09/1960	09/2022	7.210%	1	0	
1529	Yakima Chandler/Kenniwick	09/1961	09/2022	7.210%	1	0	
1530	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	35	0	
1531	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	10	0	
1532	Yakima Chandler/Kenniwick	09/1985	09/2022	12.375%	357	0	
1533	Yakima Chandler/Kenniwick	09/1986	09/2022	7.210%	439	0	
1534	Yakima Chandler/Kenniwick	09/1986	09/2022	11.375%	7	0	
1535	Yakima Chandler/Kenniwick	09/1987	09/2022	8.875%	126	0	
1536	Yakima Chandler/Kenniwick	09/1989	09/2022	9.250%	18	0	
1537	Yakima Chandler/Kenniwick	09/1990	09/2022	8.875%	40	0	
1538	Yakima Chandler/Kenniwick	09/1991	09/2022	8.750%	109	0	
1539	Yakima Chandler/Kenniwick	09/2005	09/2055	5.125%	833	833	
1540	Yakima Chandler/Kenniwick	09/2009	09/2059	4.375%	15	15	
1541	Yakima Roza	09/1958	09/2008	7.020%	1,194	0	
1542	Yakima Roza	09/1958	09/2008	7.020%	383	0	
1543	Yakima Roza	09/1984	09/2008	10.750%	5	0	
1544	Yakima Roza	09/1984	09/2008	10.750%	17	0	
1545	Yakima Roza	09/1985	09/2008	7.020%	69	0	
1546	Yakima Roza	09/1985	09/2008	12.375%	5	0	
1547	Yakima Roza	09/1986	09/2008	7.020%	6	0	
1548	Yakima Roza	09/1987	09/2008	7.020%	2	0	
1549	Yakima Roza	09/1987	09/2008	8.875%	9	0	
1550	Yakima Roza	09/2001	09/2051	5.875%	15	14	
1551	Bureau Direct	05/1995	05/2015	7.500%	35,000	0	
1552	Bureau Direct	05/1997	05/2000	6.500%	50,000	0	
1553	Bureau Direct	04/1998	05/2008	6.000%	25,000	0	
1554	Bureau Direct	09/1999	09/2004	6.400%	20,000	0	
1555	Bureau Direct	04/2000	04/2003	6.850%	40,000	0	
1556	Bureau Direct	09/2000	09/2005	6.700%	20,000	0	
1557	Bureau Direct	06/2001	06/2004	4.750%	50,000	0	
1558	Bureau Direct	03/2002	03/2005	4.600%	30,000	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1559	Bureau Direct	09/2002	09/2006	3.050%	20,000	0	
1560	Bureau Direct	12/2002	12/2006	3.050%	40,000	0	
1561	Bureau Direct	04/2003	04/2006	2.400%	40,000	0	
1562	Bureau Direct	04/2003	04/2006	2.400%	25,000	0	
1563	Bureau Direct	07/2003	07/2006	2.300%	30,000	0	
1564	Bureau Direct	09/2003	09/2006	2.500%	25,000	0	
1565	Bureau Direct	01/2004	01/2007	2.500%	25,000	0	
1566	Bureau Direct	04/2004	04/2007	2.950%	35,000	0	
1567	Bureau Direct	07/2004	07/2007	3.450%	25,000	0	
1568	Bureau Direct	09/2004	09/2007	3.100%	30,000	0	
1569	Bureau Direct	11/2004	11/2007	3.500%	20,000	0	
1570	Bureau Direct	01/2005	01/2008	3.600%	20,000	0	
1571	Bureau Direct	06/2005	06/2008	3.950%	30,000	0	
1572	Bureau Direct	09/2005	09/2008	4.250%	25,000	0	
1573	Bureau Direct	03/2006	03/2009	5.050%	25,000	0	
1574	Bureau Direct	07/2006	07/2009	5.350%	45,000	0	
1575	Bureau Direct	09/2006	09/2009	4.950%	15,000	0	
1576	Bureau Direct	01/2007	01/2010	5.100%	35,000	0	
1577	Bureau Direct	03/2007	03/2010	4.800%	30,000	0	
1578	Bureau Direct	06/2007	06/2010	5.350%	30,000	0	
1579	Bureau Direct	01/2008	01/2011	2.850%	35,000	0	
1580	Bureau Direct	01/2008	01/2011	2.850%	20,000	0	
1581	Bureau Direct	05/2008	05/2011	3.358%	35,000	0	
1582	Bureau Direct	05/2008	05/2011	3.358%	25,000	0	
1583	Bureau Direct	06/2008	06/2012	3.974%	30,000	0	
1584	Bureau Direct	07/2008	07/2012	3.913%	35,000	0	
1585	Bureau Direct	09/2008	09/2012	3.444%	35,000	0	
1586	Bureau Direct	01/2009	01/2021	3.999%	25,000	25,000	
1587	Bureau Direct	04/2009	04/2023	4.391%	25,000	25,000	04/2028
1588	Bureau Direct	06/2009	06/2039	5.192%	25,000	25,000	
1589	Bureau Direct	09/2009	09/2019	3.699%	25,000	25,000	09/2029
1590	Bureau Direct	10/2009	10/2018	3.719%	24,000	24,000	
1591	Bureau Direct	10/2009	10/2019	3.842%	20,000	20,000	
1592	Bureau Direct	11/2009	11/2019	3.637%	7,000	7,000	
1593	Bureau Direct	12/2009	12/2019	4.194%	13,000	13,000	
1594	Bureau Direct	01/2010	01/2019	3.714%	10,000	10,000	01/2029
1595	Bureau Direct	02/2010	02/2019	0.165%	10,000	0	
1596	Bureau Direct	03/2010	03/2020	4.083%	30,000	30,000	
1597	Bureau Direct	04/2010	04/2020	3.973%	18,000	18,000	
1598	Bureau Direct	05/2010	05/2020	3.574%	15,000	15,000	
1599	Bureau Direct	06/2010	06/2020	3.243%	10,000	10,000	06/2030
1600	Bureau Direct	06/2010	06/2020	3.243%	30,000	30,000	06/2030
1601	Bureau Direct	07/2010	07/2020	3.118%	17,000	17,000	
1602	Bureau Direct	08/2010	08/2020	0.165%	5,000	0	
1603	Bureau Direct	09/2010	09/2021	2.883%	22,000	22,000	
1604	Bureau Direct	10/2010	10/2034	4.211%	20,000	20,000	
1605	Bureau Direct	01/2011	09/2011	0.244%	20,000	0	
1606	Bureau Direct	01/2011	09/2011	0.244%	35,000	0	
1607	Bureau Direct	01/2011	01/2039	5.040%	35,000	35,000	
1608	Bureau Direct	02/2011	02/2040	4.995%	50,000	50,000	
1609	Bureau Direct	05/2011	09/2011	0.076%	35,000	0	
1610	Bureau Direct	05/2011	09/2011	0.076%	25,000	0	
1611	Bureau Direct	06/2011	06/2036	4.629%	30,000	30,000	
1612	Bureau Direct	06/2011	06/2038	4.700%	30,000	30,000	
1613	Bureau Direct	08/2011	08/2037	4.208%	30,000	30,000	
1614	Bureau Direct	09/2011	07/2041	3.825%	30,000	0	
1615	Bureau Direct	12/2011	12/2038	3.880%	35,000	0	
1616	Bureau Direct	01/2012	01/2038	3.893%	15,000	0	
1617	Bureau Direct	02/2012	02/2034	0.697%	55,000	55,000	
1618	Bureau Direct	06/2012	06/2041	3.666%	50,000	0	
1619	Bureau Direct	06/2012	09/2012	0.119%	30,000	0	
1620	Bureau Direct	08/2012	07/2042	3.834%	44,000	0	
1621	Bureau Direct	09/2012	09/2013	0.174%	35,000	0	
1622	Bureau Direct	09/2012	09/2042	3.668%	25,000	0	
1623	Bureau Direct	01/2013	01/2043	6.194%	70,000	0	
1624	Bureau Direct	02/2013	02/2043	5.993%	18,000	0	
1625	Bureau Direct	03/2013	03/2043	5.958%	15,000	0	
1626	Bureau Direct	04/2013	04/2043	5.633%	15,000	0	
1627	Bureau Direct	05/2013	05/2043	6.192%	18,000	0	
1628	Bureau Direct	06/2013	01/2039	0.674%	35,000	35,000	
1629	Bureau Direct	06/2013	06/2043	6.938%	21,000	0	
1630	Bureau Direct	07/2013	07/2034	7.164%	25,000	0	
1631	Bureau Direct	08/2013	08/2034	7.413%	15,000	0	
1632	Bureau Direct	11/2013	09/2014	0.140%	77,000	0	
1633	Bureau Direct	11/2013	09/2021	2.812%	50,000	50,000	
1634	Bureau Direct	11/2013	09/2022	3.125%	19,000	19,000	
1635	Bureau Direct	11/2013	09/2020	2.473%	51,000	51,000	09/2030
1636	Bureau Direct	01/2014	12/2018	1.943%	43,000	43,000	
1637	Bureau Direct	01/2014	12/2018	1.943%	38,000	38,000	
1638	Bureau Direct	01/2014	12/2018	1.943%	21,000	21,000	12/2028
1639	Bureau Direct	01/2014	12/2018	1.943%	26,000	26,000	12/2028
1640	Bureau Direct	01/2014	12/2018	1.943%	14,000	14,000	12/2028

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1641	Bureau Direct	09/2014	05/2032	0.713%	16,000	16,000	
1642	Bureau Direct	09/2014	05/2032	0.713%	10,000	10,000	
1643	Bureau Direct	09/2014	06/2033	0.732%	11,000	11,000	
1644	Bureau Direct	09/2014	06/2033	0.732%	12,000	12,000	
1645	Bureau Direct	09/2014	07/2033	0.674%	15,000	15,000	
1646	Bureau Direct	09/2015	09/2033	3.134%	10,000	10,000	
1647	Bureau Direct	04/2016	04/2031	2.661%	17,000	17,000	
1648	Bureau Direct	07/2016	07/2030	2.145%	12,000	12,000	
1649	Bureau Direct	07/2016	07/2030	2.145%	25,000	25,000	
1650	Conservation	09/1983	09/2003	12.200%	140,000	0	
1651	Conservation	09/1984	09/2004	13.050%	150,000	0	
1652	Conservation	09/1985	09/1990	10.150%	50,000	0	
1653	Conservation	03/1986	03/1991	7.800%	50,000	0	
1654	Conservation	03/1986	03/1996	8.150%	50,000	0	
1655	Conservation	04/1987	04/2007	9.300%	75,000	0	
1656	Conservation	06/1987	06/1992	8.350%	50,000	0	
1657	Conservation	04/1988	04/2008	9.900%	90,000	0	
1658	Conservation	07/1989	07/2009	8.550%	40,000	0	
1659	Conservation	09/1989	09/1995	8.600%	66,000	0	
1660	Conservation	09/1989	09/2002	8.650%	66,000	0	
1661	Conservation	07/1992	07/1997	5.800%	80,200	0	
1662	Conservation	07/1992	07/2007	7.140%	100,000	0	
1663	Conservation	10/1992	10/2012	8.050%	50,000	0	
1664	Conservation	02/1993	02/2013	7.400%	50,000	0	
1665	Conservation	08/1993	08/2013	6.750%	40,000	0	
1666	Conservation	01/1994	01/2014	6.750%	50,000	0	
1667	Conservation	05/1994	05/1998	7.100%	50,000	0	
1668	Conservation	05/1995	05/2015	7.500%	85,000	0	
1669	Conservation	01/1996	01/2011	6.700%	30,000	0	
1670	Conservation	11/1996	11/2016	7.200%	40,000	0	
1671	Conservation	05/1998	05/2009	6.000%	37,700	0	
1672	Conservation	09/1998	09/2008	5.300%	104,300	0	
1673	Conservation	09/1998	09/2013	5.600%	52,800	0	
1674	Conservation	07/2000	07/2003	6.950%	32,000	0	
1675	Conservation	06/2002	06/2005	3.750%	40,000	0	
1676	Conservation	01/2004	01/2008	2.950%	30,000	0	
1677	Conservation	03/2006	03/2009	5.050%	20,000	0	
1678	Conservation	06/2007	06/2010	5.350%	20,000	0	
1679	Conservation	09/2008	09/2013	3.701%	10,000	0	
1680	Conservation	09/2009	09/2014	2.746%	15,000	0	
1681	Conservation	01/2010	01/2015	2.609%	15,000	0	
1682	Conservation	04/2010	04/2015	2.677%	20,000	0	
1683	Conservation	08/2010	08/2015	1.619%	15,000	0	
1684	Conservation	09/2010	09/2015	1.534%	10,000	0	
1685	Conservation	01/2011	01/2023	4.046%	40,000	40,000	
1686	Conservation	04/2011	04/2023	3.932%	35,000	35,000	
1687	Conservation	08/2011	08/2023	3.206%	40,000	40,000	
1688	Conservation	10/2011	08/2012	0.204%	55,000	0	
1689	Conservation	12/2011	12/2037	0.189%	55,000	0	
1690	Conservation	05/2012	09/2015	0.676%	30,000	0	
1691	Conservation	06/2012	09/2015	0.671%	15,000	0	
1692	Conservation	08/2012	08/2024	2.788%	15,000	0	
1693	Conservation	11/2012	11/2016	0.630%	20,000	0	
1694	Conservation	01/2013	01/2018	1.107%	9,000	9,000	
1695	Conservation	03/2013	03/2025	4.992%	10,000	0	
1696	Conservation	04/2013	04/2025	4.553%	12,000	0	
1697	Conservation	08/2013	08/2025	6.973%	5,000	0	
1698	Conservation	10/2013	10/2025	3.568%	34,000	34,000	
1699	Conservation	11/2013	09/2023	3.375%	27,000	27,000	
1700	Conservation	12/2013	12/2021	3.142%	6,000	6,000	
1701	Conservation	12/2013	12/2023	0.732%	55,000	55,000	
1702	Conservation	01/2014	01/2026	3.621%	5,000	5,000	
1703	Conservation	04/2014	06/2025	0.732%	30,000	30,000	
1704	Conservation	05/2014	04/2024	0.526%	15,000	15,000	
1705	Conservation	05/2014	04/2025	0.526%	3,000	3,000	
1706	Conservation	06/2014	10/2024	0.526%	5,000	5,000	
1707	Conservation	07/2014	07/2025	0.674%	12,000	12,000	
1708	Conservation	08/2014	09/2025	0.947%	4,000	4,000	
1709	Conservation	10/2014	12/2024	0.732%	10,000	10,000	
1710	Conservation	11/2014	03/2027	0.947%	6,000	6,000	
1711	Conservation	12/2014	12/2023	2.403%	7,000	7,000	
1712	Conservation	01/2015	09/2015	0.204%	15,000	0	
1713	Conservation	01/2015	01/2024	1.908%	7,000	7,000	
1714	Conservation	02/2015	02/2024	2.251%	8,000	8,000	
1715	Conservation	03/2015	03/2025	2.295%	5,000	5,000	
1716	Conservation	04/2015	04/2024	2.269%	5,000	5,000	
1717	Conservation	05/2015	05/2021	1.898%	5,000	5,000	
1718	Conservation	07/2015	07/2021	2.067%	14,000	14,000	
1719	Conservation	08/2015	08/2022	2.233%	6,000	6,000	
1720	Conservation	09/2015	09/2022	2.062%	4,000	4,000	
1721	Conservation	10/2015	10/2027	0.732%	25,000	25,000	
1722	Conservation	11/2016	04/2017	0.684%	20,000	0	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1723	Conservation	04/2017	01/2018	1.051%	20,000	20,000	
1724	Construction (AS)	10/1992	10/2032	8.350%	38	0	
1725	Construction (AS)	07/1995	07/2025	7.700%	67	0	
1726	Construction (AS)	01/1996	01/2003	5.900%	5,622	0	
1727	Construction (AS)	01/1997	01/2004	6.800%	7,400	0	
1728	Construction (AS)	08/1998	08/2008	5.750%	3,181	0	
1729	Construction (AS)	02/1999	02/2014	5.900%	950	0	
1730	Construction (AS)	07/2000	07/2004	7.000%	10,948	0	
1731	Construction (AS)	01/2001	01/2010	6.050%	68	0	
1732	Construction (AS)	03/2002	03/2005	4.600%	1,990	0	
1733	Construction (AS)	10/2002	10/2005	3.000%	45,062	0	
1734	Construction (AS)	01/2004	01/2007	2.500%	13,357	0	
1735	Construction (AS)	11/2004	11/2008	3.750%	7,990	0	
1736	Construction (AS)	09/2006	09/2010	4.950%	9,681	0	
1737	Construction (AS)	01/2008	01/2012	3.200%	10,000	0	
1738	Construction (AS)	09/2008	09/2012	3.444%	10,000	0	
1739	Construction (AS)	09/2009	09/2014	2.746%	14,000	0	
1740	Construction (AS)	02/2010	02/2015	0.165%	7,500	0	
1741	Construction (AS)	08/2010	08/2015	1.619%	5,000	0	
1742	Construction (AS)	06/2011	06/2016	1.957%	7,000	0	
1743	Construction (AS)	08/2011	08/2016	1.423%	3,500	0	
1744	Construction (AS)	01/2012	09/2012	0.146%	10,000	0	
1745	Construction (AS)	06/2012	09/2015	0.671%	7,700	0	
1746	Construction (AS)	11/2012	11/2018	1.109%	5,250	5,250	
1747	Construction (AS)	04/2013	04/2017	0.622%	2,450	0	
1748	Construction (AS)	06/2013	06/2017	1.271%	3,000	3,000	06/2018
1749	Construction (AS)	08/2013	08/2017	1.494%	2,000	2,000	08/2018
1750	Construction (AS)	10/2013	10/2019	2.039%	4,200	4,200	
1751	Construction (AS)	10/2013	10/2019	2.039%	5,000	5,000	
1752	Construction (AS)	01/2014	01/2020	2.183%	1,750	1,750	
1753	Construction (AS)	01/2014	01/2020	2.183%	2,000	2,000	
1754	Construction (AS)	02/2014	09/2014	0.117%	950	0	
1755	Construction (AS)	04/2014	03/2020	0.947%	1,400	1,400	
1756	Construction (AS)	04/2014	03/2020	0.947%	2,000	2,000	
1757	Construction (AS)	05/2014	04/2020	0.526%	700	700	
1758	Construction (AS)	07/2014	07/2020	0.674%	1,050	1,050	
1759	Construction (AS)	11/2014	11/2020	1.809%	2,100	2,100	
1760	Construction (AS)	12/2014	12/2020	1.922%	1,050	1,050	
1761	Construction (AS)	02/2015	02/2021	1.761%	1,750	1,750	
1762	Construction (AS)	05/2015	05/2021	1.898%	2,100	2,100	
1763	Construction (AS)	09/2015	09/2017	0.744%	7,700	7,700	09/2018
1764	Construction (AS)	10/2015	10/2021	1.942%	2,800	2,800	
1765	Construction (AS)	02/2016	02/2022	0.697%	3,000	3,000	
1766	Construction (AS)	06/2016	09/2016	0.436%	7,000	0	
1767	Construction (AS)	04/2017	01/2018	1.051%	2,450	2,450	
1768	Corps	09/2015	09/2033	3.134%	4,000	4,000	
1769	Corps	02/2016	02/2045	0.697%	3,000	3,000	
1770	Corps	04/2016	04/2031	2.661%	53,000	53,000	
1771	Corps	05/2016	05/2030	2.599%	15,000	15,000	
1772	Fish and Wildlife	05/1989	05/1999	8.950%	25,000	0	
1773	Fish and Wildlife	05/1991	05/1996	7.950%	50,000	0	
1774	Fish and Wildlife	02/1993	02/2008	6.950%	20,000	0	
1775	Fish and Wildlife	09/1994	09/1999	7.650%	20,000	0	
1776	Fish and Wildlife	08/1995	08/2010	7.200%	35,000	0	
1777	Fish and Wildlife	01/1998	01/2013	6.100%	60,000	0	
1778	Fish and Wildlife	09/1999	09/2003	6.300%	20,000	0	
1779	Fish and Wildlife	01/2001	01/2005	5.650%	25,000	0	
1780	Fish and Wildlife	09/2003	09/2007	3.100%	20,000	0	
1781	Fish and Wildlife	09/2005	09/2008	4.250%	20,000	0	
1782	Fish and Wildlife	09/2006	09/2010	4.950%	20,000	0	
1783	Fish and Wildlife	06/2007	06/2010	5.350%	30,000	0	
1784	Fish and Wildlife	09/2007	09/2011	4.700%	20,000	0	
1785	Fish and Wildlife	09/2008	09/2012	3.444%	20,000	0	
1786	Fish and Wildlife	06/2009	06/2024	4.556%	20,000	20,000	
1787	Fish and Wildlife	12/2009	12/2018	4.069%	26,000	26,000	
1788	Fish and Wildlife	08/2010	08/2019	2.646%	20,000	20,000	
1789	Fish and Wildlife	01/2011	01/2026	4.440%	50,000	50,000	
1790	Fish and Wildlife	02/2011	02/2026	4.398%	15,000	15,000	
1791	Fish and Wildlife	06/2011	06/2026	4.205%	15,000	15,000	
1792	Fish and Wildlife	01/2012	01/2038	3.893%	30,000	0	
1793	Fish and Wildlife	05/2012	05/2029	0.140%	5,000	0	
1794	Fish and Wildlife	06/2012	06/2041	3.666%	11,000	0	
1795	Fish and Wildlife	08/2012	08/2027	3.090%	11,000	0	
1796	Fish and Wildlife	11/2012	11/2027	5.046%	25,000	0	
1797	Fish and Wildlife	01/2013	09/2013	0.149%	60,000	0	
1798	Fish and Wildlife	03/2013	03/2028	5.445%	10,000	0	
1799	Fish and Wildlife	04/2013	04/2028	5.042%	6,000	0	
1800	Fish and Wildlife	06/2013	06/2028	6.607%	8,000	0	
1801	Fish and Wildlife	08/2013	08/2028	7.249%	5,000	0	
1802	Fish and Wildlife	10/2013	12/2026	3.717%	28,000	28,000	
1803	Fish and Wildlife	10/2013	05/2027	3.762%	11,000	11,000	
1804	Fish and Wildlife	10/2013	10/2028	3.880%	22,000	22,000	

**TABLE 11A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1805	Fish and Wildlife	11/2013	09/2022	3.125%	31,000	31,000	
1806	Fish and Wildlife	11/2013	09/2023	3.375%	23,000	23,000	09/2028 3.64%
1807	Fish and Wildlife	11/2013	05/2027	0.713%	5,000	5,000	
1808	Fish and Wildlife	01/2014	01/2029	3.896%	7,000	7,000	

**TABLE 11B:
PROJECTED INVESTMENTS
October 1, 2015 - September 30, 2018 Cost Evaluation period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	
Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate	
1	Bureau Direct	07/2017	07/2032	2.180%	13,000		
2	Bureau Direct	08/2017	08/2032	2.180%	13,000		
3	Bureau Direct	09/2017	09/2032	2.180%	14,000		
4	Bureau Direct	07/2018	07/2033	3.250%	28,000		
5	Bureau Direct	08/2018	08/2034	3.290%	28,000		
6	Bureau Direct	09/2018	09/2035	3.330%	29,000		
7	Columbia River Fish Mitigation	09/2017	09/2067	2.380%	63,629		
8	Columbia River Fish Mitigation	09/2018	09/2068	3.320%	147,186		
9	Construction (AS)	09/2017	09/2023	1.510%	3,150		
10	Construction (AS)	09/2018	09/2024	2.560%	5,600		
11	Corps	07/2017	07/2032	2.180%	26,796		
12	Corps	08/2017	08/2032	2.180%	26,796		
13	Corps	09/2017	09/2032	2.180%	27,796		
14	Corps	07/2018	07/2033	3.250%	53,000		
15	Corps	08/2018	08/2034	3.290%	53,000		
16	Corps	09/2018	09/2035	3.330%	53,000		
17	Fish and Wildlife	09/2017	09/2032	2.180%	40,000		
18	Fish and Wildlife	09/2018	09/2033	3.250%	51,000		
19	Technology (G)	09/2017	09/2022	1.400%	8,000		
20	Technology (G)	09/2018	09/2023	2.440%	5,000		
21	Totals:				688,954		

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1	2017	Albeni Falls	Historical	3,090	6.744%	208	-	-	208
2	2017	Boise	Historical	4,425	6.657%	295	-	-	295
3	2017	Bonneville 2nd Powerhouse	Historical	38,293	7.150%	2,738	-	-	2,738
4	2017	Bonneville Dam	Historical	135,618	5.283%	7,164	-	-	7,164
5	2017	Chief Joseph	Historical	37,578	5.043%	1,895	-	-	1,895
6	2017	Columbia Basin	Historical	97,915	5.669%	5,551	-	-	5,551
7	2017	Columbia Basin 3rd Powerhouse	Historical	12,631	7.150%	903	-	-	903
8	2017	Columbia River Fish Mitigation	Historical	1,422,823	4.370%	62,178	-	-	62,178
9	2017	Cougar	Historical	16,710	4.580%	765	-	-	765
10	2017	Detroit Lake/Big Cliff	Historical	2,168	4.673%	101	-	-	101
11	2017	Dworshak	Historical	13,495	6.331%	854	-	-	854
12	2017	Green Peter/Foster	Historical	863	4.287%	37	-	-	37
13	2017	Hills Creek	Historical	2,867	5.972%	171	-	-	171
14	2017	Hungry Horse Dam	Historical	11,549	6.139%	709	-	-	709
15	2017	Ice Harbor	Historical	19,152	4.811%	921	-	-	921
16	2017	John Day	Historical	30,473	5.425%	1,653	-	-	1,653
17	2017	Libby	Historical	22,777	6.652%	1,515	-	-	1,515
18	2017	Little Goose	Historical	14,231	6.058%	862	-	-	862
19	2017	Lookout Dam	Historical	13,543	5.467%	740	-	-	740
20	2017	Lost Creek	Historical	272	6.370%	17	-	-	17
21	2017	Lower Granite	Historical	18,878	4.558%	860	-	-	860
22	2017	Lower Monument	Historical	13,764	5.380%	741	-	-	741
23	2017	Lower Snake Fish and Wildlife	Historical	233,996	7.082%	16,572	-	-	16,572
24	2017	McNary	Historical	15,096	4.927%	744	-	-	744
25	2017	Minidoka/Palisades	Historical	70,403	6.071%	4,274	-	-	4,274
26	2017	RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
27	2017	The Dalles	Historical	46,132	5.230%	2,413	-	-	2,413
28	2017	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
29	2017	Yakima Roza	Historical	14	5.878%	1	-	-	1
30	2017	Bureau Direct	Historical	991,000	3.017%	29,897	-	-	29,897
31	2017	Bureau Direct	New	26,000	-	-	-	71	71
32	2017	Conservation	Historical	422,000	2.216%	9,352	-	-	9,352
33	2017	Conservation	New	20,000	0.263%	53	-	35	87
34	2017	Construction (AS)	Historical	48,850	1.440%	704	-	(9)	695
35	2017	Construction (AS)	New	2,450	0.263%	6	-	4	11
36	2017	Corps	Historical	75,000	2.595%	1,946	-	-	1,946
37	2017	Corps	New	53,592	-	-	-	146	146
38	2017	Fish and Wildlife	Historical	340,000	3.223%	10,958	-	-	10,958
39	2017	Technology (G)	Historical	41,000	1.35266%	555	-	-	555
40	2017	Float	Historical	-	-	(632)	-	-	(632)
41	FY 2017	Subtotal:		4,330,645		168,420	-	247	168,667
42	2018	Albeni Falls	Historical	580	4.988%	29	-	-	29
43	2018	Boise	Historical	1,060	5.091%	54	-	-	54
44	2018	Bonneville Dam	Historical	131,701	5.227%	6,884	-	-	6,884
45	2018	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
46	2018	Columbia Basin	Historical	90,988	5.556%	5,055	-	-	5,055
47	2018	Columbia River Fish Mitigation	Historical	1,430,683	4.183%	59,849	-	-	59,849
48	2018	Cougar	Historical	16,684	4.576%	763	-	-	763
49	2018	Detroit Lake/Big Cliff	Historical	2,130	4.629%	99	-	-	99
50	2018	Dworshak	Historical	4,692	4.795%	225	-	-	225
51	2018	Green Peter/Foster	Historical	837	4.198%	35	-	-	35
52	2018	Hills Creek	Historical	209	3.888%	8	-	-	8
53	2018	Hungry Horse Dam	Historical	5,231	4.918%	257	-	-	257
54	2018	Ice Harbor	Historical	18,167	4.715%	857	-	-	857
55	2018	John Day	Historical	19,039	4.537%	864	-	-	864
56	2018	Libby	Historical	7,336	5.603%	411	-	-	411
57	2018	Little Goose	Historical	8,129	5.239%	426	-	-	426
58	2018	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
59	2018	Lost Creek	Historical	154	5.774%	9	-	-	9
60	2018	Lower Granite	Historical	17,567	4.364%	767	-	-	767
61	2018	Lower Monument	Historical	11,604	5.051%	586	-	-	586
62	2018	Lower Snake Fish and Wildlife	Historical	5,152	4.370%	225	-	-	225
63	2018	McNary	Historical	14,461	4.829%	698	-	-	698
64	2018	Minidoka/Palisades	Historical	19,492	3.253%	634	-	-	634
65	2018	RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
66	2018	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
67	2018	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
68	2018	Yakima Roza	Historical	14	5.878%	1	-	-	1
69	2018	Bureau Direct	Historical	1,031,000	2.984%	30,768	-	-	30,768
70	2018	Bureau Direct	New	56,000	-	-	-	228	228
71	2018	Conservation	Historical	442,000	2.128%	9,407	-	(51)	9,356
72	2018	Construction (AS)	Historical	54,450	1.245%	678	-	(7)	670
73	2018	Corps	Historical	156,389	2.378%	3,719	-	-	3,719
74	2018	Corps	New	106,000	-	-	-	432	432
75	2018	Fish and Wildlife	Historical	380,000	3.113%	11,830	-	-	11,830
76	2018	Technology (G)	Historical	49,000	1.360%	667	-	-	667

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
77	2018	Float	Historical	-	-	(611)	-	-	(611)
78	FY 2018	Subtotal:		4,172,280		139,752	-	601	140,353
79	2019	Albeni Falls	Historical	580	4.988%	29	-	-	29
80	2019	Boise	Historical	1,060	5.091%	54	-	-	54
81	2019	Bonneville Dam	Historical	107,256	5.0223	5,387	-	-	5,387
82	2019	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
83	2019	Columbia Basin	Historical	90,988	5.556%	5,055	-	-	5,055
84	2019	Columbia River Fish Mitigation	Historical	1,541,604	4.056%	62,523	-	-	62,523
85	2019	Cougar	Historical	16,684	4.576%	763	-	-	763
86	2019	Detroit Lake/Big Cliff	Historical	2,130	4.629%	99	-	-	99
87	2019	Dworshak	Historical	4,692	4.795%	225	-	-	225
88	2019	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
89	2019	Hills Creek	Historical	202	3.813%	8	-	-	8
90	2019	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
91	2019	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
92	2019	John Day	Historical	18,421	4.492%	827	-	-	827
93	2019	Libby	Historical	1,774	4.751%	84	-	-	84
94	2019	Little Goose	Historical	3,521	4.406%	155	-	-	155
95	2019	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
96	2019	Lost Creek	Historical	7	3.748%	-	-	-	-
97	2019	Lower Granite	Historical	15,542	4.168%	648	-	-	648
98	2019	Lower Monument	Historical	8,303	4.723%	392	-	-	392
99	2019	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
100	2019	McNary	Historical	13,414	4.747%	637	-	-	637
101	2019	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
102	2019	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
103	2019	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
104	2019	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
105	2019	Bureau Direct	Historical	1,116,000	3.001%	33,493	-	(1,121)	32,372
106	2019	Conservation	Historical	413,000	2.240%	9,252	-	-	9,252
107	2019	Construction (AS)	Historical	44,900	1.640%	736	-	(20)	717
108	2019	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
109	2019	Fish and Wildlife	Historical	431,000	3.007%	12,958	-	(309)	12,649
110	2019	Replacements	New	219,724	1.935%	4,252	-	-	4,252
111	2019	Technology (G)	Historical	54,000	1.460%	789	-	-	789
112	2019	Float	Historical	-	-	(1,253)	-	-	(1,253)
113	FY 2019	Subtotal:		4,547,570		151,860	-	(1,450)	150,410
114	2020	Albeni Falls	Historical	580	4.988%	29	-	-	29
115	2020	Boise	Historical	1,060	5.091%	54	-	-	54
116	2020	Bonneville Dam	Historical	67,438	4.794%	3,233	-	-	3,233
117	2020	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
118	2020	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
119	2020	Columbia River Fish Mitigation	Historical	1,455,259	3.97569	57,857	-	-	57,857
120	2020	Cougar	Historical	13,061	4.354%	569	-	-	569
121	2020	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
122	2020	Dworshak	Historical	3,864	4.665%	180	-	-	180
123	2020	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
124	2020	Hills Creek	Historical	200	3.800%	8	-	-	8
125	2020	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
126	2020	Ice Harbor	Historical	7,552	3.720%	281	-	-	281
127	2020	John Day	Historical	12,081	4.029%	487	-	-	487
128	2020	Libby	Historical	1,774	4.751%	84	-	-	84
129	2020	Little Goose	Historical	3,426	4.379%	150	-	-	150
130	2020	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
131	2020	Lost Creek	Historical	7	3.748%	-	-	-	-
132	2020	Lower Granite	Historical	13,411	3.964%	532	-	-	532
133	2020	Lower Monument	Historical	4,850	4.258%	207	-	-	207
134	2020	Lower Snake Fish and Wildlife	Historical	3,700	3.901%	144	-	-	144
135	2020	McNary	Historical	7,276	4.218%	307	-	-	307
136	2020	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
137	2020	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
138	2020	The Dalles	Historical	40,145	5.068%	2,035	-	-	2,035
139	2020	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
140	2020	Bureau Direct	Historical	1,011,000	2.980%	30,126	-	(1,347)	28,779
141	2020	Conservation	Historical	413,000	2.240%	9,252	-	-	9,252
142	2020	Construction (AS)	Historical	39,650	1.404%	556	-	(94)	462
143	2020	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
144	2020	Fish and Wildlife	Historical	385,000	3.091%	11,902	-	-	11,902
145	2020	Replacements	Historical	219,724	3.870%	8,503	-	-	8,503
146	2020	Replacements	New	219,724	1.935%	4,252	-	-	4,252
147	2020	Technology (G)	Historical	54,000	1.460%	789	-	-	789
148	2020	Float	Historical	-	-	(1,148)	-	-	(1,148)
149	FY 2020	Subtotal:		4,380,015		143,054	-	(1,441)	141,612
150	2021	Albeni Falls	Historical	580	4.988%	29	-	-	29
151	2021	Boise	Historical	1,060	5.091%	54	-	-	54
152	2021	Bonneville Dam	Historical	45,614	4.586%	2,092	-	-	2,092

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	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
153	2021	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
154	2021	Columbia Basin	Historical	10,800	3.951%	427	-	-	427
155	2021	Columbia River Fish Mitigation	Historical	1,334,780	3.872%	51,682	-	-	51,682
156	2021	Cougar	Historical	4,931	3.082%	152	-	-	152
157	2021	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
158	2021	Dworshak	Historical	2,390	4.380%	105	-	-	105
159	2021	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
160	2021	Hills Creek	Historical	154	3.404%	5	-	-	5
161	2021	Hungry Horse Dam	Historical	1,728	4.260%	74	-	-	74
162	2021	Ice Harbor	Historical	7,502	3.711%	278	-	-	278
163	2021	John Day	Historical	9,254	3.694%	342	-	-	342
164	2021	Libby	Historical	1,774	4.751%	84	-	-	84
165	2021	Little Goose	Historical	3,280	4.346%	143	-	-	143
166	2021	Lookout Dam	Historical	883	4.435%	39	-	-	39
167	2021	Lost Creek	Historical	7	3.748%	-	-	-	-
168	2021	Lower Granite	Historical	12,977	3.925%	509	-	-	509
169	2021	Lower Monument	Historical	4,301	4.148%	178	-	-	178
170	2021	Lower Snake Fish and Wildlife	Historical	3,598	3.866%	139	-	-	139
171	2021	McNary	Historical	6,630	4.130%	274	-	-	274
172	2021	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
173	2021	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
174	2021	The Dalles	Historical	4,126	4.574%	189	-	-	189
175	2021	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
176	2021	Bureau Direct	Historical	866,000	2.702%	23,403	-	(1,367)	22,036
177	2021	Conservation	Historical	413,000	2.240%	9,252	-	(80)	9,173
178	2021	Construction (AS)	Historical	21,550	1.626%	350	-	(34)	317
179	2021	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
180	2021	Fish and Wildlife	Historical	385,000	2.973%	11,446	-	(228)	11,218
181	2021	Replacements	Historical	439,447	3.870%	17,007	-	-	17,007
182	2021	Replacements	New	219,724	1.935%	4,252	-	-	4,252
183	2021	Technology (G)	Historical	54,000	0.984%	532	-	(85)	447
184	2021	Float	Historical	-	-	(1,171)	-	-	(1,171)
185	FY 2021	Subtotal:		4,219,430		132,737	-	(1,793)	130,944
186	2022	Albeni Falls	Historical	99	4.322%	4	-	-	4
187	2022	Boise	Historical	81	4.792%	4	-	-	4
188	2022	Bonneville Dam	Historical	32,739	4.378%	1,433	-	-	1,433
189	2022	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
190	2022	Columbia Basin	Historical	9,871	3.852%	380	-	-	380
191	2022	Columbia River Fish Mitigation	Historical	1,275,316	3.822%	48,739	-	-	48,739
192	2022	Cougar	Historical	4,811	3.035%	146	-	-	146
193	2022	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
194	2022	Dworshak	Historical	2,390	4.381%	105	-	-	105
195	2022	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
196	2022	Hills Creek	Historical	154	3.404%	5	-	-	5
197	2022	Hungry Horse Dam	Historical	1,434	4.1082	59	-	-	59
198	2022	Ice Harbor	Historical	7,502	3.711%	278	-	-	278
199	2022	John Day	Historical	8,420	3.600%	303	-	-	303
200	2022	Libby	Historical	1,774	4.751%	84	-	-	84
201	2022	Little Goose	Historical	3,280	4.346%	143	-	-	143
202	2022	Lookout Dam	Historical	311	3.396%	11	-	-	11
203	2022	Lost Creek	Historical	7	3.748%	-	-	-	-
204	2022	Lower Granite	Historical	12,977	3.925%	509	-	-	509
205	2022	Lower Monument	Historical	4,016	4.123%	166	-	-	166
206	2022	Lower Snake Fish and Wildlife	Historical	3,219	3.792%	122	-	-	122
207	2022	McNary	Historical	2,550	3.537%	90	-	-	90
208	2022	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
209	2022	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
210	2022	The Dalles	Historical	1,957	4.621%	90	-	-	90
211	2022	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
212	2022	Bureau Direct	Historical	624,000	2.779%	17,339	-	-	17,339
213	2022	Conservation	Historical	394,000	2.227%	8,774	-	(58)	8,715
214	2022	Construction (AS)	Historical	14,550	1.571%	229	-	(24)	204
215	2022	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
216	2022	Fish and Wildlife	Historical	365,000	3.011%	10,990	-	-	10,990
217	2022	Replacements	Historical	659,171	3.870%	25,510	-	-	25,510
218	2022	Replacements	New	219,724	1.935%	4,252	-	-	4,252
219	2022	Technology (G)	Historical	19,000	1.444%	274	-	(7)	268
220	2022	Float	Historical	-	-	(1,109)	-	-	(1,109)
221	FY 2022	Subtotal:		4,032,692		129,803	-	(89)	129,713
222	2023	Albeni Falls	Historical	99	4.322%	4	-	-	4
223	2023	Boise	Historical	81	4.792%	4	-	-	4
224	2023	Bonneville Dam	Historical	32,739	4.378%	1,433	-	-	1,433
225	2023	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
226	2023	Columbia Basin	Historical	9,871	3.852%	380	-	-	380
227	2023	Columbia River Fish Mitigation	Historical	973,748	3.612%	35,168	-	-	35,168
228	2023	Cougar	Historical	4,811	3.035%	146	-	-	146

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(\$000s) (FY 2018)**

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
229	2023	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
230	2023	Dworshak	Historical	2,390	4.381%	105	-	-	105
231	2023	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
232	2023	Hills Creek	Historical	154	3.404%	5	-	-	5
233	2023	Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
234	2023	Ice Harbor	Historical	7,502	3.711%	278	-	-	278
235	2023	John Day	Historical	8,420	3.600%	303	-	-	303
236	2023	Libby	Historical	1,774	4.75146	84	-	-	84
237	2023	Little Goose	Historical	3,280	4.346%	143	-	-	143
238	2023	Lookout Dam	Historical	311	3.396%	11	-	-	11
239	2023	Lost Creek	Historical	7	3.748%	-	-	-	-
240	2023	Lower Granite	Historical	12,977	3.925%	509	-	-	509
241	2023	Lower Monument	Historical	4,016	4.123%	166	-	-	166
242	2023	Lower Snake Fish and Wildlife	Historical	3,219	3.792%	122	-	-	122
243	2023	McNary	Historical	2,550	3.537%	90	-	-	90
244	2023	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
245	2023	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
246	2023	The Dalles	Historical	1,957	4.621%	90	-	-	90
247	2023	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
248	2023	Bureau Direct	Historical	605,000	2.831%	17,125	-	(456)	16,669
249	2023	Conservation	Historical	378,000	2.025%	7,654	-	(947)	6,708
250	2023	Construction (AS)	Historical	8,750	2.182%	191	-	-	191
251	2023	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
252	2023	Fish and Wildlife	Historical	334,000	2.569%	8,582	-	(422)	8,160
253	2023	Replacements	Historical	878,894	3.870%	34,013	-	-	34,013
254	2023	Replacements	New	219,724	1.935%	4,252	-	-	4,252
255	2023	Technology (G)	Historical	5,000	2.440%	122	-	-	122
256	2023	Float	Historical	-	-	(1,163)	-	-	(1,163)
257	FY 2023	Subtotal:		3,865,048		120,749		(1,824)	118,925
258	2024	Albeni Falls	Historical	99	4.322%	4	-	-	4
259	2024	Boise	Historical	64	4.875%	3	-	-	3
260	2024	Bonneville Dam	Historical	28,133	4.366%	1,228	-	-	1,228
261	2024	Chief Joseph	Historical	3,542	4.856%	172	-	-	172
262	2024	Columbia Basin	Historical	7,884	3.688%	291	-	-	291
263	2024	Columbia River Fish Mitigation	Historical	811,657	3.450%	28,003	-	-	28,003
264	2024	Cougar	Historical	4,581	2.964%	136	-	-	136
265	2024	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
266	2024	Dworshak	Historical	10	4.877%	-	-	-	-
267	2024	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
268	2024	Hills Creek	Historical	154	3.404%	5	-	-	5
269	2024	Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
270	2024	Ice Harbor	Historical	4,887	3.355%	164	-	-	164
271	2024	John Day	Historical	8,420	3.600%	303	-	-	303
272	2024	Libby	Historical	1,774	4.751%	84	-	-	84
273	2024	Little Goose	Historical	109	3.493%	4	-	-	4
274	2024	Lookout Dam	Historical	311	3.396%	11	-	-	11
275	2024	Lost Creek	Historical	7	3.74829	-	-	-	-
276	2024	Lower Granite	Historical	7,308	3.576%	261	-	-	261
277	2024	Lower Monument	Historical	1,684	3.773%	64	-	-	64
278	2024	Lower Snake Fish and Wildlife	Historical	1,680	3.257%	55	-	-	55
279	2024	McNary	Historical	2,550	3.537%	90	-	-	90
280	2024	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
281	2024	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
282	2024	The Dalles	Historical	1,957	4.621%	90	-	-	90
283	2024	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
284	2024	Bureau Direct	Historical	604,937	2.328%	14,081	-	(862)	13,219
285	2024	Conservation	Historical	236,000	1.202%	2,837	-	(260)	2,577
286	2024	Construction (AS)	Historical	5,600	2.560%	143	-	-	143
287	2024	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
288	2024	Fish and Wildlife	Historical	269,000	2.493%	6,706	-	(573)	6,133
289	2024	Replacements	Historical	1,098,618	3.870%	42,517	-	-	42,517
290	2024	Replacements	New	219,724	1.935%	4,252	-	-	4,252
291	2024	Float	Historical	-	-	(1,150)	-	-	(1,150)
292	FY 2024	Subtotal:		3,658,193		110,031		(1,694)	108,337
293	2025	Albeni Falls	Historical	57	4.375%	2	-	-	2
294	2025	Boise	Historical	64	4.875%	3	-	-	3
295	2025	Bonneville Dam	Historical	25,942	4.373%	1,134	-	-	1,134
296	2025	Chief Joseph	Historical	3,542	4.856%	172	-	-	172
297	2025	Columbia Basin	Historical	6,989	3.618%	253	-	-	253
298	2025	Columbia River Fish Mitigation	Historical	686,444	3.342%	22,938	-	-	22,938
299	2025	Cougar	Historical	4,522	2.947%	133	-	-	133
300	2025	Detroit Lake/Big Cliff	Historical	558	2.882%	16	-	-	16
301	2025	Dworshak	Historical	10	4.877%	-	-	-	-
302	2025	Green Peter/Foster	Historical	253	3.366%	9	-	-	9
303	2025	Hills Creek	Historical	154	3.404%	5	-	-	5
304	2025	Hungry Horse Dam	Historical	642	3.941%	25	-	-	25

TABLE 11C:
Interest Calculation Summary
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(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
305	2025	Ice Harbor	Historical	4,680	3.316%	155	-	-	155
306	2025	John Day	Historical	8,064	3.571%	288	-	-	288
307	2025	Libby	Historical	1,734	4.763%	83	-	-	83
308	2025	Little Goose	Historical	79	3.203%	3	-	-	3
309	2025	Lookout Dam	Historical	311	3.396%	11	-	-	11
310	2025	Lost Creek	Historical	7	3.748%	-	-	-	-
311	2025	Lower Granite	Historical	3,507	3.128%	110	-	-	110
312	2025	Lower Monument	Historical	254	3.199%	8	-	-	8
313	2025	Lower Snake Fish and Wildlife	Historical	1,674	3.254%	54	-	-	54
314	2025	McNary	Historical	1,791	3.39431	61	-	-	61
315	2025	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
316	2025	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
317	2025	The Dalles	Historical	1,957	4.621%	90	-	-	90
318	2025	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
319	2025	Bureau Direct	Historical	463,899	1.839%	8,532	-	-	8,532
320	2025	Conservation	Historical	139,000	1.507%	2,095	-	(104)	1,991
321	2025	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
322	2025	Fish and Wildlife	Historical	220,000	2.060%	4,531	-	(399)	4,133
323	2025	Replacements	Historical	1,318,341	3.870%	51,020	-	-	51,020
324	2025	Replacements	New	219,724	1.935%	4,252	-	-	4,252
325	2025	Float	Historical	-	-	(1,087)	-	-	(1,087)
326	FY 2025	Subtotal:		3,449,057		104,475	-	(503)	103,972
327	2026	Albeni Falls	Historical	57	4.375%	2	-	-	2
328	2026	Boise	Historical	64	4.875%	3	-	-	3
329	2026	Bonneville Dam	Historical	14,979	4.828%	723	-	-	723
330	2026	Chief Joseph	Historical	3,538	4.857%	172	-	-	172
331	2026	Columbia Basin	Historical	5,266	3.574%	188	-	-	188
332	2026	Columbia River Fish Mitigation	Historical	538,741	3.220%	17,347	-	-	17,347
333	2026	Cougar	Historical	4,229	2.892%	122	-	-	122
334	2026	Detroit Lake/Big Cliff	Historical	558	2.882%	16	-	-	16
335	2026	Dworshak	Historical	10	4.877%	-	-	-	-
336	2026	Green Peter/Foster	Historical	166	3.166%	5	-	-	5
337	2026	Hills Creek	Historical	142	3.375%	5	-	-	5
338	2026	Hungry Horse Dam	Historical	139	4.628%	6	-	-	6
339	2026	Ice Harbor	Historical	3,862	3.224%	124	-	-	124
340	2026	John Day	Historical	7,890	3.567%	281	-	-	281
341	2026	Libby	Historical	1,582	4.860%	77	-	-	77
342	2026	Little Goose	Historical	79	3.203%	3	-	-	3
343	2026	Lookout Dam	Historical	294	3.375%	10	-	-	10
344	2026	Lower Granite	Historical	3,499	3.127%	109	-	-	109
345	2026	Lower Monument	Historical	254	3.199%	8	-	-	8
346	2026	Lower Snake Fish and Wildlife	Historical	1,330	3.105%	41	-	-	41
347	2026	McNary	Historical	1,226	3.230%	40	-	-	40
348	2026	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
349	2026	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
350	2026	The Dalles	Historical	1,957	4.621%	90	-	-	90
351	2026	Yakima Chandler/Kenniwick	Historical	15	4.37675	1	-	-	1
352	2026	Bureau Direct	Historical	343,000	1.695%	5,815	-	-	5,815
353	2026	Conservation	Historical	70,000	1.338%	937	-	(533)	404
354	2026	Corps	Historical	315,389	2.286%	7,210	-	(144)	7,066
355	2026	Fish and Wildlife	Historical	164,468	1.932%	3,178	-	-	3,178
356	2026	Replacements	Historical	1,538,065	3.870%	59,523	-	-	59,523
357	2026	Replacements	New	219,724	1.935%	4,252	-	-	4,252
358	2026	Float	Historical	-	-	(1,150)	-	-	(1,150)
359	FY 2026	Subtotal:		3,259,976		99,773	-	(677)	99,096
360	2027	Albeni Falls	Historical	57	4.375%	2	-	-	2
361	2027	Boise	Historical	64	4.875%	3	-	-	3
362	2027	Bonneville Dam	Historical	14,979	4.828%	723	-	-	723
363	2027	Chief Joseph	Historical	3,510	4.869%	171	-	-	171
364	2027	Columbia Basin	Historical	5,255	3.575%	188	-	-	188
365	2027	Columbia River Fish Mitigation	Historical	289,939	3.115%	9,031	-	-	9,031
366	2027	Cougar	Historical	4,090	2.875%	118	-	-	118
367	2027	Detroit Lake/Big Cliff	Historical	558	2.882%	16	-	-	16
368	2027	Dworshak	Historical	10	4.877%	-	-	-	-
369	2027	Green Peter/Foster	Historical	138	3.123%	4	-	-	4
370	2027	Hungry Horse Dam	Historical	137	4.653%	6	-	-	6
371	2027	Ice Harbor	Historical	3,747	3.219%	121	-	-	121
372	2027	John Day	Historical	1,729	4.253%	74	-	-	74
373	2027	Libby	Historical	1,567	4.875%	76	-	-	76
374	2027	Little Goose	Historical	79	3.203%	3	-	-	3
375	2027	Lower Granite	Historical	3,499	3.127%	109	-	-	109
376	2027	Lower Monument	Historical	165	3.104%	5	-	-	5
377	2027	Lower Snake Fish and Wildlife	Historical	1,330	3.105%	41	-	-	41
378	2027	McNary	Historical	1,215	3.229%	39	-	-	39
379	2027	Minidoka/Palisades	Historical	19,443	3.247%	631	-	-	631
380	2027	RRP - Green Springs	Historical	1	2.843%	-	-	-	-

TABLE 11C:
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	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
381	2027	The Dalles	Historical	1,957	4.621%	90	-	-	90
382	2027	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
383	2027	Bureau Direct	Historical	313,665	1.358%	4,260	-	(228)	4,032
384	2027	Conservation	Historical	31,000	0.682%	211	-	-	211
385	2027	Corps	Historical	209,684	2.164%	4,537	-	(548)	3,989
386	2027	Fish and Wildlife	Historical	158,000	1.413%	2,232	-	(36)	2,196
387	2027	Replacements	Historical	1,757,788	3.870%	68,026	-	-	68,026
388	2027	Replacements	New	219,724	1.935	4,252	-	-	4,252
389	2027	Float	Historical	-	-	(1,127)	-	-	(1,127)
390	FY 2027	Subtotal:		3,043,343		93,845	-	(812)	93,033
391	2028	Albeni Falls	Historical	57	4.375%	2	-	-	2
392	2028	Boise	Historical	64	4.875%	3	-	-	3
393	2028	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
394	2028	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
395	2028	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
396	2028	Columbia River Fish Mitigation	Historical	100,183	3.290%	3,296	-	-	3,296
397	2028	Dworshak	Historical	10	4.877%	-	-	-	-
398	2028	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
399	2028	Ice Harbor	Historical	14	4.874%	1	-	-	1
400	2028	John Day	Historical	1,548	4.375%	68	-	-	68
401	2028	Libby	Historical	1,567	4.875%	76	-	-	76
402	2028	Little Goose	Historical	13	4.877%	1	-	-	1
403	2028	Lower Granite	Historical	24	4.875%	1	-	-	1
404	2028	Lower Monument	Historical	9	4.871%	-	-	-	-
405	2028	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
406	2028	McNary	Historical	215	4.875%	10	-	-	10
407	2028	The Dalles	Historical	1,651	4.875%	80	-	-	80
408	2028	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
409	2028	Bureau Direct	Historical	241,284	0.942%	2,273	-	(494)	1,779
410	2028	Conservation	Historical	25,000	0.366%	92	-	(76)	16
411	2028	Corps	Historical	128,006	1.624%	2,079	-	(601)	1,478
412	2028	Fish and Wildlife	Historical	89,586	0.806%	722	-	(9)	713
413	2028	Replacements	Historical	1,977,512	3.870%	76,530	-	-	76,530
414	2028	Replacements	New	219,724	1.935%	4,252	-	-	4,252
415	2028	Float	Historical	-	-	(1,063)	-	-	(1,063)
416	FY 2028	Subtotal:		2,806,975		89,417	-	(1,180)	88,238
417	2029	Albeni Falls	Historical	57	4.375%	2	-	-	2
418	2029	Boise	Historical	64	4.875%	3	-	-	3
419	2029	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
420	2029	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
421	2029	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
422	2029	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
423	2029	Dworshak	Historical	10	4.877%	-	-	-	-
424	2029	Hungry Horse Dam	Historical	137	4.65448	6	-	-	6
425	2029	Ice Harbor	Historical	14	4.874%	1	-	-	1
426	2029	John Day	Historical	1,548	4.375%	68	-	-	68
427	2029	Libby	Historical	1,567	4.875%	76	-	-	76
428	2029	Little Goose	Historical	13	4.877%	1	-	-	1
429	2029	Lower Granite	Historical	24	4.875%	1	-	-	1
430	2029	Lower Monument	Historical	9	4.871%	-	-	-	-
431	2029	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
432	2029	McNary	Historical	215	4.875%	10	-	-	10
433	2029	The Dalles	Historical	1,651	4.875%	80	-	-	80
434	2029	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
435	2029	Bureau Direct	Historical	89,093	0.403%	359	-	(88)	271
436	2029	Corps	Historical	2,108	0.493%	10	-	(2)	9
437	2029	Fish and Wildlife	Historical	20,000	0.421%	84	-	(22)	62
438	2029	Replacements	Historical	2,197,235	3.293%	72,359	-	-	72,359
439	2029	Replacements	New	219,724	1.935%	4,252	-	-	4,252
440	2029	Float	Historical	-	-	(1,794)	-	-	(1,794)
441	FY 2029	Subtotal:		2,590,394		78,288	-	(112)	78,176
442	2030	Albeni Falls	Historical	57	4.375%	2	-	-	2
443	2030	Boise	Historical	64	4.875%	3	-	-	3
444	2030	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
445	2030	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
446	2030	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
447	2030	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
448	2030	Dworshak	Historical	10	4.877%	-	-	-	-
449	2030	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
450	2030	Ice Harbor	Historical	14	4.874%	1	-	-	1
451	2030	John Day	Historical	1,548	4.375%	68	-	-	68
452	2030	Libby	Historical	1,567	4.875%	76	-	-	76
453	2030	Little Goose	Historical	13	4.877%	1	-	-	1
454	2030	Lower Granite	Historical	24	4.875%	1	-	-	1
455	2030	Lower Monument	Historical	9	4.871%	-	-	-	-
456	2030	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4

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	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
457	2030	McNary	Historical	215	4.875%	10	-	-	10
458	2030	The Dalles	Historical	1,651	4.87497	80	-	-	80
459	2030	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
460	2030	Replacements	Historical	1,761,955	3.093%	54,496	-	-	54,496
461	2030	Replacements	New	219,724	1.935%	4,252	-	-	4,252
462	2030	Float	Historical	-	-	(1,640)	-	-	(1,640)
463	FY 2030	Subtotal:		2,043,913		60,127	-	-	60,127
464	2031	Albeni Falls	Historical	57	4.375%	2	-	-	2
465	2031	Boise	Historical	64	4.875%	3	-	-	3
466	2031	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
467	2031	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
468	2031	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
469	2031	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
470	2031	Dworshak	Historical	10	4.877%	-	-	-	-
471	2031	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
472	2031	Ice Harbor	Historical	14	4.874%	1	-	-	1
473	2031	John Day	Historical	1,548	4.375%	68	-	-	68
474	2031	Libby	Historical	1,567	4.875%	76	-	-	76
475	2031	Little Goose	Historical	13	4.877%	1	-	-	1
476	2031	Lower Granite	Historical	24	4.875%	1	-	-	1
477	2031	Lower Monument	Historical	9	4.871%	-	-	-	-
478	2031	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
479	2031	McNary	Historical	215	4.875%	10	-	-	10
480	2031	The Dalles	Historical	1,651	4.875%	80	-	-	80
481	2031	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
482	2031	Replacements	Historical	1,274,122	2.729%	34,773	-	-	34,773
483	2031	Replacements	New	219,724	1.935%	4,252	-	-	4,252
484	2031	Float	Historical	-	-	(1,733)	-	-	(1,733)
485	FY 2031	Subtotal:		1,556,080		40,310	-	-	40,310
486	2032	Albeni Falls	Historical	57	4.375%	2	-	-	2
487	2032	Boise	Historical	64	4.875%	3	-	-	3
488	2032	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
489	2032	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
490	2032	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
491	2032	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
492	2032	Dworshak	Historical	10	4.87731	-	-	-	-
493	2032	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
494	2032	Ice Harbor	Historical	14	4.874%	1	-	-	1
495	2032	John Day	Historical	1,548	4.375%	68	-	-	68
496	2032	Libby	Historical	1,567	4.875%	76	-	-	76
497	2032	Little Goose	Historical	13	4.877%	1	-	-	1
498	2032	Lower Granite	Historical	24	4.875%	1	-	-	1
499	2032	Lower Monument	Historical	9	4.871%	-	-	-	-
500	2032	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
501	2032	McNary	Historical	215	4.875%	10	-	-	10
502	2032	The Dalles	Historical	1,651	4.875%	80	-	-	80
503	2032	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
504	2032	Replacements	Historical	742,673	1.935%	14,371	-	-	14,371
505	2032	Replacements	New	219,724	1.935%	4,252	-	-	4,252
506	2032	Float	Historical	-	-	(1,990)	-	-	(1,990)
507	FY 2032	Subtotal:		1,024,631		19,651	-	-	19,651
508	2033	Albeni Falls	Historical	57	4.375%	2	-	-	2
509	2033	Boise	Historical	64	4.875%	3	-	-	3
510	2033	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
511	2033	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
512	2033	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
513	2033	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
514	2033	Dworshak	Historical	10	4.877%	-	-	-	-
515	2033	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
516	2033	Ice Harbor	Historical	14	4.874%	1	-	-	1
517	2033	John Day	Historical	1,548	4.375%	68	-	-	68
518	2033	Libby	Historical	1,567	4.875%	76	-	-	76
519	2033	Little Goose	Historical	13	4.877%	1	-	-	1
520	2033	Lower Granite	Historical	24	4.875%	1	-	-	1
521	2033	Lower Monument	Historical	9	4.871%	-	-	-	-
522	2033	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
523	2033	McNary	Historical	215	4.875%	10	-	-	10
524	2033	The Dalles	Historical	1,651	4.87497	80	-	-	80
525	2033	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
526	2033	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
527	2033	Replacements	New	219,724	1.935%	4,252	-	-	4,252
528	2033	Float	Historical	-	-	(2,031)	-	-	(2,031)
529	FY 2033	Subtotal:		501,681		9,491	-	-	9,491
530	2034	Albeni Falls	Historical	57	4.375%	2	-	-	2
531	2034	Boise	Historical	64	4.875%	3	-	-	3
532	2034	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
533	2034	Chief Joseph	Historical	3,500	4.875%	171	-	-	171

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	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
534	2034	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
535	2034	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
536	2034	Dworshak	Historical	10	4.877%	-	-	-	-
537	2034	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
538	2034	Ice Harbor	Historical	14	4.874%	1	-	-	1
539	2034	John Day	Historical	1,548	4.375%	68	-	-	68
540	2034	Libby	Historical	1,567	4.875%	76	-	-	76
541	2034	Little Goose	Historical	13	4.877%	1	-	-	1
542	2034	Lower Granite	Historical	24	4.875%	1	-	-	1
543	2034	Lower Monument	Historical	9	4.871%	-	-	-	-
544	2034	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
545	2034	McNary	Historical	215	4.875%	10	-	-	10
546	2034	The Dalles	Historical	1,651	4.875%	80	-	-	80
547	2034	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
548	2034	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
549	2034	Replacements	New	219,724	1.935%	4,252	-	-	4,252
550	2034	Float	Historical	-	-	(2,020)	-	-	(2,020)
551	FY 2034	Subtotal:		501,681		9,502	-	-	9,502
552	2035	Albeni Falls	Historical	57	4.375%	2	-	-	2
553	2035	Boise	Historical	64	4.875%	3	-	-	3
554	2035	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
555	2035	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
556	2035	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
557	2035	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
558	2035	Dworshak	Historical	10	4.877%	-	-	-	-
559	2035	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
560	2035	Ice Harbor	Historical	14	4.874%	1	-	-	1
561	2035	John Day	Historical	1,548	4.375%	68	-	-	68
562	2035	Libby	Historical	1,567	4.875%	76	-	-	76
563	2035	Little Goose	Historical	13	4.877%	1	-	-	1
564	2035	Lower Granite	Historical	24	4.875%	1	-	-	1
565	2035	Lower Monument	Historical	9	4.871%	-	-	-	-
566	2035	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
567	2035	McNary	Historical	215	4.875%	10	-	-	10
568	2035	The Dalles	Historical	1,651	4.875%	80	-	-	80
569	2035	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
570	2035	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
571	2035	Replacements	New	219,724	1.935%	4,252	-	-	4,252
572	2035	Float	Historical	-	-	(2,042)	-	-	(2,042)
573	FY 2035	Subtotal:		501,681		9,480	-	-	9,480
574	2036	Albeni Falls	Historical	57	4.375%	2	-	-	2
575	2036	Boise	Historical	64	4.875%	3	-	-	3
576	2036	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
577	2036	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
578	2036	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
579	2036	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
580	2036	Dworshak	Historical	10	4.877%	-	-	-	-
581	2036	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
582	2036	Ice Harbor	Historical	14	4.874%	1	-	-	1
583	2036	John Day	Historical	1,548	4.375%	68	-	-	68
584	2036	Libby	Historical	1,567	4.875%	76	-	-	76
585	2036	Little Goose	Historical	13	4.877%	1	-	-	1
586	2036	Lower Granite	Historical	24	4.875%	1	-	-	1
587	2036	Lower Monument	Historical	9	4.871%	-	-	-	-
588	2036	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
589	2036	McNary	Historical	215	4.875%	10	-	-	10
590	2036	The Dalles	Historical	1,651	4.875%	80	-	-	80
591	2036	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
592	2036	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
593	2036	Replacements	New	219,724	1.935%	4,252	-	-	4,252
594	2036	Float	Historical	-	-	(2,107)	-	-	(2,107)
595	FY 2036	Subtotal:		501,681		9,415	-	-	9,415
596	2037	Albeni Falls	Historical	57	4.375%	2	-	-	2
597	2037	Boise	Historical	64	4.875%	3	-	-	3
598	2037	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
599	2037	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
600	2037	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
601	2037	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
602	2037	Dworshak	Historical	10	4.877%	-	-	-	-
603	2037	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
604	2037	Ice Harbor	Historical	14	4.874%	1	-	-	1
605	2037	John Day	Historical	1,548	4.375%	68	-	-	68
606	2037	Libby	Historical	1,567	4.875%	76	-	-	76
607	2037	Little Goose	Historical	13	4.877%	1	-	-	1
608	2037	Lower Granite	Historical	24	4.875%	1	-	-	1
609	2037	Lower Monument	Historical	9	4.871%	-	-	-	-
610	2037	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
611	2037	McNary	Historical	215	4.875%	10	-	-	10
612	2037	The Dalles	Historical	1,651	4.875%	80	-	-	80
613	2037	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
614	2037	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
615	2037	Replacements	New	219,724	1.935%	4,252	-	-	4,252
616	2037	Float	Historical	-	-	(2,108)	-	-	(2,108)
617	FY 2037	Subtotal:		501,681		9,414	-	-	9,414
618	2038	Albeni Falls	Historical	57	4.375%	2	-	-	2
619	2038	Boise	Historical	64	4.875%	3	-	-	3
620	2038	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
621	2038	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
622	2038	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
623	2038	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
624	2038	Dworshak	Historical	10	4.877%		-	-	
625	2038	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
626	2038	Ice Harbor	Historical	14	4.874%	1	-	-	1
627	2038	John Day	Historical	1,548	4.375%	68	-	-	68
628	2038	Libby	Historical	1,567	4.875%	76	-	-	76
629	2038	Little Goose	Historical	13	4.877%	1	-	-	1
630	2038	Lower Granite	Historical	24	4.875%	1	-	-	1
631	2038	Lower Monument	Historical	9	4.871%		-	-	
632	2038	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
633	2038	McNary	Historical	215	4.875%	10	-	-	10
634	2038	The Dalles	Historical	1,651	4.875%	80	-	-	80
635	2038	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
636	2038	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
637	2038	Replacements	New	219,724	1.935%	4,252	-	-	4,252
638	2038	Float	Historical	-	-	(2,131)	-	-	(2,131)
639	FY 2038	Subtotal:		501,681		9,391	-	-	9,391
640	2039	Albeni Falls	Historical	57	4.375%	2	-	-	2
641	2039	Boise	Historical	64	4.875%	3	-	-	3
642	2039	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
643	2039	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
644	2039	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
645	2039	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
646	2039	Dworshak	Historical	10	4.877%		-	-	
647	2039	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
648	2039	Ice Harbor	Historical	14	4.874%	1	-	-	1
649	2039	John Day	Historical	1,548	4.375%	68	-	-	68
650	2039	Libby	Historical	1,567	4.875%	76	-	-	76
651	2039	Little Goose	Historical	13	4.877%	1	-	-	1
652	2039	Lower Granite	Historical	24	4.875%	1	-	-	1
653	2039	Lower Monument	Historical	9	4.871%		-	-	
654	2039	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
655	2039	McNary	Historical	215	4.875%	10	-	-	10
656	2039	The Dalles	Historical	1,651	4.875%	80	-	-	80
657	2039	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
658	2039	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
659	2039	Replacements	New	219,724	1.935%	4,252	-	-	4,252
660	2039	Float	Historical	-	-	(2,203)	-	-	(2,203)
661	FY 2039	Subtotal:		501,681		9,320	-	-	9,320
662	2040	Albeni Falls	Historical	57	4.375%	2	-	-	2
663	2040	Boise	Historical	64	4.875%	3	-	-	3
664	2040	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
665	2040	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
666	2040	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
667	2040	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
668	2040	Dworshak	Historical	10	4.877%		-	-	
669	2040	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
670	2040	Ice Harbor	Historical	14	4.874%	1	-	-	1
671	2040	John Day	Historical	1,548	4.375%	68	-	-	68
672	2040	Libby	Historical	1,567	4.875%	76	-	-	76
673	2040	Little Goose	Historical	13	4.877%	1	-	-	1
674	2040	Lower Granite	Historical	24	4.875%	1	-	-	1
675	2040	Lower Monument	Historical	9	4.871%		-	-	
676	2040	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
677	2040	McNary	Historical	215	4.875%	10	-	-	10
678	2040	The Dalles	Historical	1,651	4.875%	80	-	-	80
679	2040	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
680	2040	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
681	2040	Replacements	New	219,724	1.935%	4,252	-	-	4,252
682	2040	Float	Historical	-	-	(2,208)	-	-	(2,208)
683	FY 2040	Subtotal:		501,681		9,314	-	-	9,314
684	2041	Albeni Falls	Historical	57	4.375%	2	-	-	2
685	2041	Boise	Historical	64	4.875%	3	-	-	3
686	2041	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
687	2041	Chief Joseph	Historical	3,500	4.875%	171	-	-	171

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
688	2041	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
689	2041	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
690	2041	Dworshak	Historical	10	4.877%	-	-	-	-
691	2041	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
692	2041	Ice Harbor	Historical	14	4.874%	1	-	-	1
693	2041	John Day	Historical	1,548	4.375%	68	-	-	68
694	2041	Libby	Historical	1,567	4.875%	76	-	-	76
695	2041	Little Goose	Historical	13	4.877%	1	-	-	1
696	2041	Lower Granite	Historical	24	4.875%	1	-	-	1
697	2041	Lower Monument	Historical	9	4.871%	-	-	-	-
698	2041	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
699	2041	McNary	Historical	215	4.875%	10	-	-	10
700	2041	The Dalles	Historical	1,651	4.875%	80	-	-	80
701	2041	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
702	2041	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
703	2041	Replacements	New	219,724	1.935%	4,252	-	-	4,252
704	2041	Float	Historical	-	-	(2,223)	-	-	(2,223)
705	FY 2041	Subtotal:		501,681		9,299	-	-	9,299
706	2042	Albeni Falls	Historical	57	4.375%	2	-	-	2
707	2042	Boise	Historical	64	4.875%	3	-	-	3
708	2042	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
709	2042	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
710	2042	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
711	2042	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
712	2042	Dworshak	Historical	10	4.877%	-	-	-	-
713	2042	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
714	2042	Ice Harbor	Historical	14	4.874%	1	-	-	1
715	2042	John Day	Historical	1,548	4.375%	68	-	-	68
716	2042	Libby	Historical	1,567	4.875%	76	-	-	76
717	2042	Little Goose	Historical	13	4.877%	1	-	-	1
718	2042	Lower Granite	Historical	24	4.875%	1	-	-	1
719	2042	Lower Monument	Historical	9	4.871%	-	-	-	-
720	2042	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
721	2042	McNary	Historical	215	4.875%	10	-	-	10
722	2042	The Dalles	Historical	1,651	4.875%	80	-	-	80
723	2042	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
724	2042	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
725	2042	Replacements	New	219,724	1.935%	4,252	-	-	4,252
726	2042	Float	Historical	-	-	(2,223)	-	-	(2,223)
727	FY 2042	Subtotal:		501,681		9,299	-	-	9,299
728	2043	Albeni Falls	Historical	57	4.375%	2	-	-	2
729	2043	Boise	Historical	64	4.875%	3	-	-	3
730	2043	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
731	2043	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
732	2043	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
733	2043	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
734	2043	Dworshak	Historical	10	4.877%	-	-	-	-
735	2043	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
736	2043	Ice Harbor	Historical	14	4.874%	1	-	-	1
737	2043	John Day	Historical	1,548	4.375%	68	-	-	68
738	2043	Libby	Historical	1,567	4.875%	76	-	-	76
739	2043	Little Goose	Historical	13	4.877%	1	-	-	1
740	2043	Lower Granite	Historical	24	4.875%	1	-	-	1
741	2043	Lower Monument	Historical	9	4.871%	-	-	-	-
742	2043	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
743	2043	McNary	Historical	215	4.875%	10	-	-	10
744	2043	The Dalles	Historical	1,651	4.875%	80	-	-	80
745	2043	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
746	2043	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
747	2043	Replacements	New	219,724	1.935%	4,252	-	-	4,252
748	2043	Float	Historical	-	-	(2,223)	-	-	(2,223)
749	FY 2043	Subtotal:		501,681		9,299	-	-	9,299
750	2044	Albeni Falls	Historical	57	4.375%	2	-	-	2
751	2044	Boise	Historical	64	4.875%	3	-	-	3
752	2044	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
753	2044	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
754	2044	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
755	2044	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
756	2044	Dworshak	Historical	10	4.877%	-	-	-	-
757	2044	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
758	2044	Ice Harbor	Historical	14	4.874%	1	-	-	1
759	2044	John Day	Historical	1,548	4.375%	68	-	-	68
760	2044	Libby	Historical	1,567	4.875%	76	-	-	76
761	2044	Little Goose	Historical	13	4.877%	1	-	-	1
762	2044	Lower Granite	Historical	24	4.875%	1	-	-	1
763	2044	Lower Monument	Historical	9	4.871%	-	-	-	-
764	2044	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
765	2044	McNary	Historical	215	4.875%	10	-	-	10
766	2044	The Dalles	Historical	1,651	4.875%	80	-	-	80
767	2044	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
768	2044	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
769	2044	Replacements	New	219,724	1.935%	4,252	-	-	4,252
770	2044	Float	Historical	-	-	(1,956)	-	-	(1,956)
771	FY 2044	Subtotal:		501,681		9,566	-	-	9,566
772	2045	Albeni Falls	Historical	57	4.375%	2	-	-	2
773	2045	Boise	Historical	64	4.875%	3	-	-	3
774	2045	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
775	2045	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
776	2045	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
777	2045	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
778	2045	Dworshak	Historical	10	4.877%	-	-	-	-
779	2045	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
780	2045	Ice Harbor	Historical	14	4.874%	1	-	-	1
781	2045	John Day	Historical	1,548	4.375%	68	-	-	68
782	2045	Libby	Historical	1,567	4.875%	76	-	-	76
783	2045	Little Goose	Historical	13	4.877%	1	-	-	1
784	2045	Lower Granite	Historical	24	4.875%	1	-	-	1
785	2045	Lower Monument	Historical	9	4.871%	-	-	-	-
786	2045	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
787	2045	McNary	Historical	215	4.875%	10	-	-	10
788	2045	The Dalles	Historical	1,651	4.875%	80	-	-	80
789	2045	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
790	2045	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
791	2045	Replacements	New	219,724	1.935%	4,252	-	-	4,252
792	2045	Float	Historical	-	-	(1,160)	-	-	(1,160)
793	FY 2045	Subtotal:		501,681		10,362	-	-	10,362
794	2046	Albeni Falls	Historical	57	4.375%	2	-	-	2
795	2046	Boise	Historical	64	4.875%	3	-	-	3
796	2046	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
797	2046	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
798	2046	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
799	2046	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
800	2046	Dworshak	Historical	10	4.877%	-	-	-	-
801	2046	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
802	2046	Ice Harbor	Historical	14	4.874%	1	-	-	1
803	2046	John Day	Historical	1,548	4.375%	68	-	-	68
804	2046	Libby	Historical	1,567	4.875%	76	-	-	76
805	2046	Little Goose	Historical	13	4.877%	1	-	-	1
806	2046	Lower Granite	Historical	24	4.875%	1	-	-	1
807	2046	Lower Monument	Historical	9	4.871%	-	-	-	-
808	2046	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
809	2046	McNary	Historical	215	4.875%	10	-	-	10
810	2046	The Dalles	Historical	1,651	4.875%	80	-	-	80
811	2046	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
812	2046	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
813	2046	Replacements	New	219,724	1.935%	4,252	-	-	4,252
814	2046	Float	Historical	-	-	(1,160)	-	-	(1,160)
815	FY 2046	Subtotal:		501,681		10,362	-	-	10,362
816	2047	Albeni Falls	Historical	57	4.375%	2	-	-	2
817	2047	Boise	Historical	64	4.875%	3	-	-	3
818	2047	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
819	2047	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
820	2047	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
821	2047	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
822	2047	Dworshak	Historical	10	4.877%	-	-	-	-
823	2047	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
824	2047	Ice Harbor	Historical	14	4.874%	1	-	-	1
825	2047	John Day	Historical	1,548	4.375%	68	-	-	68
826	2047	Libby	Historical	1,567	4.875%	76	-	-	76
827	2047	Little Goose	Historical	13	4.877%	1	-	-	1
828	2047	Lower Granite	Historical	24	4.875%	1	-	-	1
829	2047	Lower Monument	Historical	9	4.871%	-	-	-	-
830	2047	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
831	2047	McNary	Historical	215	4.875%	10	-	-	10
832	2047	The Dalles	Historical	1,651	4.875%	80	-	-	80
833	2047	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
834	2047	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
835	2047	Replacements	New	219,724	1.935%	4,252	-	-	4,252
836	2047	Float	Historical	-	-	(1,160)	-	-	(1,160)
837	FY 2047	Subtotal:		501,681		10,362	-	-	10,362
838	2048	Albeni Falls	Historical	57	4.375%	2	-	-	2
839	2048	Boise	Historical	64	4.875%	3	-	-	3
840	2048	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
841	2048	Chief Joseph	Historical	3,500	4.875%	171	-	-	171

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
842	2048	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
843	2048	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
844	2048	Dworshak	Historical	10	4.877%	-	-	-	-
845	2048	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
846	2048	Ice Harbor	Historical	14	4.874%	1	-	-	1
847	2048	John Day	Historical	1,548	4.375%	68	-	-	68
848	2048	Libby	Historical	1,567	4.875%	76	-	-	76
849	2048	Little Goose	Historical	13	4.877%	1	-	-	1
850	2048	Lower Granite	Historical	24	4.875%	1	-	-	1
851	2048	Lower Monument	Historical	9	4.871%	-	-	-	-
852	2048	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
853	2048	McNary	Historical	215	4.875%	10	-	-	10
854	2048	The Dalles	Historical	1,651	4.875%	80	-	-	80
855	2048	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
856	2048	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
857	2048	Replacements	New	219,724	1.935%	4,252	-	-	4,252
858	2048	Float	Historical	-	-	(1,160)	-	-	(1,160)
859	FY 2048	Subtotal:		501,681		10,362	-	-	10,362
860	2049	Albeni Falls	Historical	57	4.375%	2	-	-	2
861	2049	Boise	Historical	64	4.875%	3	-	-	3
862	2049	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
863	2049	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
864	2049	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
865	2049	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
866	2049	Dworshak	Historical	10	4.877%	-	-	-	-
867	2049	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
868	2049	Ice Harbor	Historical	14	4.874%	1	-	-	1
869	2049	John Day	Historical	1,548	4.375%	68	-	-	68
870	2049	Libby	Historical	1,567	4.875%	76	-	-	76
871	2049	Little Goose	Historical	13	4.877%	1	-	-	1
872	2049	Lower Granite	Historical	24	4.875%	1	-	-	1
873	2049	Lower Monument	Historical	9	4.871%	-	-	-	-
874	2049	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
875	2049	McNary	Historical	215	4.875%	10	-	-	10
876	2049	The Dalles	Historical	1,651	4.875%	80	-	-	80
877	2049	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
878	2049	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
879	2049	Replacements	New	219,724	1.935%	4,252	-	-	4,252
880	2049	Float	Historical	-	-	(1,160)	-	-	(1,160)
881	FY 2049	Subtotal:		501,681		10,362	-	-	10,362
882	2050	Albeni Falls	Historical	57	4.375%	2	-	-	2
883	2050	Boise	Historical	64	4.875%	3	-	-	3
884	2050	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
885	2050	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
886	2050	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
887	2050	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
888	2050	Dworshak	Historical	10	4.877%	-	-	-	-
889	2050	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
890	2050	Ice Harbor	Historical	14	4.874%	1	-	-	1
891	2050	John Day	Historical	1,548	4.375%	68	-	-	68
892	2050	Libby	Historical	1,567	4.875%	76	-	-	76
893	2050	Little Goose	Historical	13	4.877%	1	-	-	1
894	2050	Lower Granite	Historical	24	4.875%	1	-	-	1
895	2050	Lower Monument	Historical	9	4.871%	-	-	-	-
896	2050	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
897	2050	McNary	Historical	215	4.875%	10	-	-	10
898	2050	The Dalles	Historical	1,651	4.875%	80	-	-	80
899	2050	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
900	2050	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
901	2050	Replacements	New	219,724	1.935%	4,252	-	-	4,252
902	2050	Float	Historical	-	-	(1,160)	-	-	(1,160)
903	FY 2050	Subtotal:		501,681		10,362	-	-	10,362
904	2051	Albeni Falls	Historical	57	4.375%	2	-	-	2
905	2051	Boise	Historical	64	4.875%	3	-	-	3
906	2051	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
907	2051	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
908	2051	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
909	2051	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
910	2051	Dworshak	Historical	10	4.877%	-	-	-	-
911	2051	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
912	2051	Ice Harbor	Historical	14	4.874%	1	-	-	1
913	2051	John Day	Historical	1,548	4.375%	68	-	-	68
914	2051	Libby	Historical	1,567	4.875%	76	-	-	76
915	2051	Little Goose	Historical	13	4.877%	1	-	-	1
916	2051	Lower Granite	Historical	24	4.875%	1	-	-	1
917	2051	Lower Monument	Historical	9	4.871%	-	-	-	-
918	2051	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
919	2051	McNary	Historical	215	4.875%	10	-	-	10
920	2051	The Dalles	Historical	1,651	4.875%	80	-	-	80
921	2051	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
922	2051	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
923	2051	Replacements	New	219,724	1.935%	4,252	-	-	4,252
924	2051	Float	Historical	-	-	(1,160)	-	-	(1,160)
925	FY 2051	Subtotal:		501,681		10,362	-	-	10,362
926	2052	Albeni Falls	Historical	57	4.375%	2	-	-	2
927	2052	Boise	Historical	64	4.875%	3	-	-	3
928	2052	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
929	2052	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
930	2052	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
931	2052	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
932	2052	Dworshak	Historical	10	4.877%		-	-	
933	2052	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
934	2052	Ice Harbor	Historical	14	4.874%	1	-	-	1
935	2052	John Day	Historical	1,548	4.375%	68	-	-	68
936	2052	Libby	Historical	1,567	4.875%	76	-	-	76
937	2052	Little Goose	Historical	13	4.877%	1	-	-	1
938	2052	Lower Granite	Historical	24	4.875%	1	-	-	1
939	2052	Lower Monument	Historical	9	4.871%		-	-	
940	2052	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
941	2052	McNary	Historical	215	4.875%	10	-	-	10
942	2052	The Dalles	Historical	1,651	4.875%	80	-	-	80
943	2052	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
944	2052	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
945	2052	Replacements	New	219,724	1.935%	4,252	-	-	4,252
946	2052	Float	Historical	-	-	(1,160)	-	-	(1,160)
947	FY 2052	Subtotal:		501,681		10,362	-	-	10,362
948	2053	Albeni Falls	Historical	57	4.375%	2	-	-	2
949	2053	Boise	Historical	64	4.875%	3	-	-	3
950	2053	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
951	2053	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
952	2053	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
953	2053	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
954	2053	Dworshak	Historical	10	4.877%		-	-	
955	2053	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
956	2053	Ice Harbor	Historical	14	4.874%	1	-	-	1
957	2053	John Day	Historical	1,548	4.375%	68	-	-	68
958	2053	Libby	Historical	1,567	4.875%	76	-	-	76
959	2053	Little Goose	Historical	13	4.877%	1	-	-	1
960	2053	Lower Granite	Historical	24	4.875%	1	-	-	1
961	2053	Lower Monument	Historical	9	4.871%		-	-	
962	2053	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
963	2053	McNary	Historical	215	4.875%	10	-	-	10
964	2053	The Dalles	Historical	1,651	4.875%	80	-	-	80
965	2053	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
966	2053	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
967	2053	Replacements	New	219,724	1.935%	4,252	-	-	4,252
968	2053	Float	Historical	-	-	(1,160)	-	-	(1,160)
969	FY 2053	Subtotal:		501,681		10,362	-	-	10,362
970	2054	Albeni Falls	Historical	57	4.375%	2	-	-	2
971	2054	Boise	Historical	64	4.875%	3	-	-	3
972	2054	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
973	2054	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
974	2054	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
975	2054	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
976	2054	Dworshak	Historical	10	4.877%		-	-	
977	2054	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
978	2054	Ice Harbor	Historical	14	4.874%	1	-	-	1
979	2054	John Day	Historical	1,548	4.375%	68	-	-	68
980	2054	Libby	Historical	1,567	4.875%	76	-	-	76
981	2054	Little Goose	Historical	13	4.877%	1	-	-	1
982	2054	Lower Granite	Historical	24	4.875%	1	-	-	1
983	2054	Lower Monument	Historical	9	4.871%		-	-	
984	2054	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
985	2054	McNary	Historical	215	4.875%	10	-	-	10
986	2054	The Dalles	Historical	1,651	4.875%	80	-	-	80
987	2054	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
988	2054	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
989	2054	Replacements	New	219,724	1.935%	4,252	-	-	4,252
990	2054	Float	Historical	-	-	(1,160)	-	-	(1,160)
991	FY 2054	Subtotal:		501,681		10,362	-	-	10,362
992	2055	Albeni Falls	Historical	57	4.375%	2	-	-	2
993	2055	Boise	Historical	64	4.875%	3	-	-	3
994	2055	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
995	2055	Chief Joseph	Historical	3,500	4.875%	171	-	-	171

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
996	2055	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
997	2055	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
998	2055	Dworshak	Historical	10	4.877%	-	-	-	-
999	2055	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1000	2055	Ice Harbor	Historical	14	4.874%	1	-	-	1
1001	2055	John Day	Historical	1,548	4.375%	68	-	-	68
1002	2055	Libby	Historical	1,567	4.875%	76	-	-	76
1003	2055	Little Goose	Historical	13	4.877%	1	-	-	1
1004	2055	Lower Granite	Historical	24	4.875%	1	-	-	1
1005	2055	Lower Monument	Historical	9	4.871%	-	-	-	-
1006	2055	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1007	2055	McNary	Historical	215	4.875%	10	-	-	10
1008	2055	The Dalles	Historical	1,651	4.875%	80	-	-	80
1009	2055	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1010	2055	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
1011	2055	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1012	2055	Float	Historical	-	-	(1,160)	-	-	(1,160)
1013	FY 2055	Subtotal:		501,681		10,362	-	-	10,362
1014	2056	Albeni Falls	Historical	57	4.375%	2	-	-	2
1015	2056	Boise	Historical	64	4.875%	3	-	-	3
1016	2056	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1017	2056	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1018	2056	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1019	2056	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1020	2056	Dworshak	Historical	10	4.877%	-	-	-	-
1021	2056	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1022	2056	Ice Harbor	Historical	14	4.874%	1	-	-	1
1023	2056	John Day	Historical	1,548	4.375%	68	-	-	68
1024	2056	Libby	Historical	1,567	4.875%	76	-	-	76
1025	2056	Little Goose	Historical	13	4.877%	1	-	-	1
1026	2056	Lower Granite	Historical	24	4.875%	1	-	-	1
1027	2056	Lower Monument	Historical	9	4.871%	-	-	-	-
1028	2056	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1029	2056	McNary	Historical	215	4.875%	10	-	-	10
1030	2056	The Dalles	Historical	1,651	4.875%	80	-	-	80
1031	2056	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1032	2056	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
1033	2056	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1034	2056	Float	Historical	-	-	(1,160)	-	-	(1,160)
1035	FY 2056	Subtotal:		501,681		10,362	-	-	10,362
1036	2057	Albeni Falls	Historical	57	4.375%	2	-	-	2
1037	2057	Boise	Historical	64	4.875%	3	-	-	3
1038	2057	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1039	2057	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1040	2057	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1041	2057	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1042	2057	Dworshak	Historical	10	4.877%	-	-	-	-
1043	2057	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1044	2057	Ice Harbor	Historical	14	4.874%	1	-	-	1
1045	2057	John Day	Historical	1,548	4.375%	68	-	-	68
1046	2057	Libby	Historical	1,567	4.875%	76	-	-	76
1047	2057	Little Goose	Historical	13	4.877%	1	-	-	1
1048	2057	Lower Granite	Historical	24	4.875%	1	-	-	1
1049	2057	Lower Monument	Historical	9	4.871%	-	-	-	-
1050	2057	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1051	2057	McNary	Historical	215	4.875%	10	-	-	10
1052	2057	The Dalles	Historical	1,651	4.875%	80	-	-	80
1053	2057	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1054	2057	Replacements	Historical	219,724	1.935	4,252	-	-	4,252
1055	2057	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1056	2057	Float	Historical	-	-	(1,160)	-	-	(1,160)
1057	FY 2057	Subtotal:		501,681		10,362	-	-	10,362
1058	2058	Albeni Falls	Historical	57	4.375%	2	-	-	2
1059	2058	Boise	Historical	64	4.875%	3	-	-	3
1060	2058	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1061	2058	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1062	2058	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1063	2058	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1064	2058	Dworshak	Historical	10	4.877%	-	-	-	-
1065	2058	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1066	2058	Ice Harbor	Historical	14	4.874%	1	-	-	1
1067	2058	John Day	Historical	1,548	4.375%	68	-	-	68
1068	2058	Libby	Historical	1,567	4.875%	76	-	-	76
1069	2058	Little Goose	Historical	13	4.877%	1	-	-	1
1070	2058	Lower Granite	Historical	24	4.875%	1	-	-	1
1071	2058	Lower Monument	Historical	9	4.871%	-	-	-	-
1072	2058	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4

TABLE 11C:
Interest Calculation Summary
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1073	2058	McNary	Historical	215	4.875%	10	-	-	10
1074	2058	The Dalles	Historical	1,651	4.875%	80	-	-	80
1075	2058	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1076	2058	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1077	2058	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1078	2058	Float	Historical	-	-	(1,160)	-	-	(1,160)
1079	FY 2058	Subtotal:		501,681		10,362	-	-	10,362
1080	2059	Albeni Falls	Historical	57	4.375%	2	-	-	2
1081	2059	Columbia Basin	Historical	1,338	4.375%	59	-	-	59
1082	2059	Hungry Horse Dam	Historical	60	4.376%	3	-	-	3
1083	2059	John Day	Historical	1,548	4.375%	68	-	-	68
1084	2059	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1085	2059	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1086	2059	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1087	2059	Float	Historical	-	-	(1,160)	-	-	(1,160)
1088	FY 2059	Subtotal:		442,465		7,475	-	-	7,475
1089	2060	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1090	2060	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1091	2060	Float	Historical	-	-	(1,160)	-	-	(1,160)
1092	FY 2060	Subtotal:		439,447		7,343	-	-	7,343
1093	2061	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1094	2061	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1095	2061	Float	Historical	-	-	(1,160)	-	-	(1,160)
1096	FY 2061	Subtotal:		439,447		7,343	-	-	7,343
1097	2062	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1098	2062	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1099	2062	Float	Historical	-	-	(1,160)	-	-	(1,160)
1100	FY 2062	Subtotal:		439,447		7,343	-	-	7,343
1101	2063	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1102	2063	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1103	2063	Float	Historical	-	-	(1,160)	-	-	(1,160)
1104	FY 2063	Subtotal:		439,447		7,343	-	-	7,343
1105	2064	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1106	2064	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1107	2064	Float	Historical	-	-	(1,160)	-	-	(1,160)
1108	FY 2064	Subtotal:		439,447		7,343	-	-	7,343
1109	2065	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1110	2065	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1111	2065	Float	Historical	-	-	(1,160)	-	-	(1,160)
1112	FY 2065	Subtotal:		439,447		7,343	-	-	7,343
1113	2066	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1114	2066	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1115	2066	Float	Historical	-	-	(1,160)	-	-	(1,160)
1116	FY 2066	Subtotal:		439,447		7,343	-	-	7,343
1117	2067	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1118	2067	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1119	2067	Float	Historical	-	-	(1,160)	-	-	(1,160)
1120	FY 2067	Subtotal:		439,447		7,343	-	-	7,343
1121	2068	Replacements	Historical	219,724	1.935%	4,252	-	-	4,252
1122	2068	Replacements	New	219,724	1.935%	4,252	-	-	4,252
1123	2068	Float	Historical	-	-	(1,160)	-	-	(1,160)
1124	FY 2068	Subtotal:		439,447		7,343	-	-	7,343
1125	Grand Total:			70,421,439		2,013,710	-	(10,729)	2,002,981

**TABLE 11D:
Application of Amortization
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rollad Maturity Date	Roll Rate	Principal Paid	Premium	Discount
1	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1983	9/30/2033	30,488	9,472	7.150%	7.150%				9,472		
2	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1986	9/30/2033	30,578	21,534	7.150%	7.150%				21,534		
3	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1987	9/30/2033	2,801	2,801	7.150%	7.150%				2,801		
4	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1988	9/30/2033	1,271	1,271	7.150%	7.150%				1,271		
5	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1989	9/30/2033	1,232	1,232	7.150%	7.150%				1,232		
6	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1990	9/30/2033	1,588	1,588	7.150%	7.150%				1,588		
7	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1985	9/30/2035	47,921	47,921	7.150%	7.150%				47,921		
8	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	22	22	7.150%	7.150%				22		
9	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	52	52	7.150%	7.150%				52		
10	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	121	121	7.150%	7.150%				121		
11	2017	Lower Monument	Corps of Engineers	9/30/1996	9/30/2036	264	264	7.150%	7.150%				264		
12	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1987	9/30/2037	72,536	72,536	7.150%	7.150%				72,536		
13	2017	Libby	Corps of Engineers	9/30/1988	9/30/2038	18,043	14,781	7.150%	7.150%				14,781		
14	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1988	9/30/2038	805	805	7.150%	7.150%				805		
15	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1990	9/30/2040	1,557	1,557	7.150%	7.150%				1,557		
16	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	17	17	7.150%	7.150%				17		
17	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	450	450	7.150%	7.150%				450		
18	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	733	733	7.150%	7.150%				733		
19	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1991	9/30/2041	4,411	4,411	7.150%	7.150%				4,411		
20	2017	Ice Harbor	Corps of Engineers	9/30/1996	9/30/2041	371	371	7.150%	7.150%				371		
21	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1993	9/30/2043	71,632	71,632	7.150%	7.150%				71,632		
22	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1994	9/30/2044	5,700	5,700	7.150%	7.150%				5,700		
23	2017	Chief Joseph	Corps of Engineers	9/30/1994	9/30/2044	4,280	4,017	7.150%	7.150%				4,017		
24	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1994	9/30/2044	4,722	4,722	7.150%	7.150%				4,722		
25	2017	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1994	9/30/2044	12,631	12,631	7.150%	7.150%				12,631		
26	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1995	9/30/2045	3,791	3,791	7.150%	7.150%				3,791		
27	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/1995	9/30/2045	43,343	39,282	7.150%	7.150%				39,282		
28	2017	Detroit Lake/Big Cliff	Corps of Engineers	9/30/1995	9/30/2045	38	38	7.150%	7.150%				38		
29	2017	Lookout Dam	Corps of Engineers	34972	53235	80	39	7.15	7.15				39		
30	2017	Lost Creek	Corps of Engineers	9/30/1995	9/30/2045	94	94	7.150%	7.150%				94		
31	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	41	41	7.150%	7.150%				41		
32	2017	McNary	Corps of Engineers	9/30/1995	9/30/2045	16	16	7.150%	7.150%				16		
33	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	443	443	7.150%	7.150%				443		
34	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	147	147	7.150%	7.150%				147		
35	2017	Dworshak	Corps of Engineers	9/30/1995	9/30/2045	1,162	1,162	7.150%	7.150%				1,162		
36	2017	John Day	Corps of Engineers	34972	53235	37	37	7.15	7.15				37		
37	2017	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	33	33	7.150%	7.150%				33		
38	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	99	99	7.150%	7.150%				99		
39	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	531	531	7.150%	7.150%				531		
40	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	562	562	7.150%	7.150%				562		
41	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	624	624	7.150%	7.150%				624		
42	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	1,105	1,105	7.150%	7.150%				1,105		
43	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	243	243	7.150%	7.150%				243		
44	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	712	712	7.150%	7.150%				712		
45	2017	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	287	287	7.150%	7.150%				287		
46	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1995	9/30/2045	6,190	6,190	7.150%	7.150%				6,190		
47	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	1,122	1,122	7.150%	7.150%				1,122		
48	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	410	410	7.150%	7.150%				410		
49	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	784	784	7.150%	7.150%				784		
50	2017	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	2,511	2,453	7.150%	7.150%				2,453		
51	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	440	440	7.150%	7.150%				440		
52	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	608	608	7.150%	7.150%				608		
53	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	7,653	7,653	7.150%	7.150%				7,653		
54	2017	Boise	Bureau of Reclamation	35338	53600	442	442	7.15	7.15				442		
55	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1996	9/30/2046	376	376	7.150%	7.150%				376		
56	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18		
57	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3		
58	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/1996	9/30/2046	2,431	2,431	7.150%	7.150%				2,431		
59	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3		
60	2017	Green Peter/Foster	Corps of Engineers	9/30/1996	9/30/2046	26	26	7.150%	7.150%				26		
61	2017	Hills Creek	Corps of Engineers	35338	53600	28	28	7.15	7.15				28		
62	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	15	15	7.150%	7.150%				15		
63	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10		
64	2017	Lost Creek	Corps of Engineers	9/30/1996	9/30/2046	24	24	7.150%	7.150%				24		
65	2017	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	9	9	7.150%	7.150%				9		
66	2017	Lower Monument	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10		
67	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1996	9/30/2046	12,085	12,085	7.150%	7.150%				12,085		
68	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18		
69	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4		
70	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4		
71	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	2	2	7.150%	7.150%				2		
72	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10		
73	2017	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	656	656	7.150%	7.150%				656		
74	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	211	211	7.150%	7.150%				211		
75	2017	The Dalles	Corps of Engineers	9/30/1996	9/30/2046	1,991	1,991	7.150%	7.150%				1,991		
76	2017	Bonneville Dam	Corps of Engineers	35338	53600	80	80	7.15	7.15				80		
77	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	355	355	7.150%	7.150%				355		
78	2017	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	426	426	7.150%	7.150%				426		
79	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	241	241	7.150%	7.150%				241		
80	2017	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	625	625	7.150%	7.150%				625		
81	2017	McNary	Corps of Engineers	9/30/1996	9/30/2046	619	619	7.150%	7.150%				619		
82	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	109	109	7.150%	7.150%				109		
83	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	729	729	7.150%	7.150%				729		

TABLE 11D:
Application of Amortization
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Roll'd Maturity Date	Roll Rate	Principal Paid	Premium	Discount
416	2027	RRP - Green Springs	Bureau of Reclamation	9/30/2013	9/30/2063	1	2.875%	2.875%					1		
417	2027	Bonneville Dam	Corps of Engineers	9/30/2015	9/30/2065	102	3.250%	3.250%					102		
418	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/2015	9/30/2065	64,291	3.250%	3.250%					64,291		
419	2027	Green Peter/Foster	Corps of Engineers	9/30/2015	9/30/2065	68	3.250%	3.250%					68		
420	2027	Hungry Horse Dam	Bureau of Reclamation	9/30/2015	9/30/2065	0	3.250%	3.250%					0		
421	2027	Ice Harbor	Corps of Engineers	9/30/2015	9/30/2065	3,175	3.250%	3.250%					3,175		
422	2027	John Day	Corps of Engineers	9/30/2015	9/30/2065	163	3.250%	3.250%					163		
423	2027	Lower Granite	Corps of Engineers	9/30/2015	9/30/2065	1,597	3.250%	3.250%					1,597		
424	2027	Minidoka/Palisades	Bureau of Reclamation	9/30/2015	9/30/2065	19,237	3.250%	3.250%					19,237		
425	2027	The Dalles	Corps of Engineers	4/22/77	6/5/40	302	3.00%	3.25%					302		
426	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/2016	9/30/2066	30,190	3.000%	3.000%					30,190		
427	2027	Cougar	Corps of Engineers	9/30/2016	9/30/2066	2	3.000%	3.000%					2		
428	2027	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2016	9/30/2066	31	3.000%	3.000%					31		
429	2027	Green Peter/Foster	Corps of Engineers	9/30/2016	9/30/2066	70	3.000%	3.000%					70		
430	2027	Ice Harbor	Corps of Engineers	9/30/2016	9/30/2066	558	3.000%	3.000%					558		
431	2027	Lower Granite	Corps of Engineers	9/30/2016	9/30/2066	1,878	3.000%	3.000%					1,878		
432	2027	Lower Monument	Corps of Engineers	9/30/2016	9/30/2066	155	3.000%	3.000%					155		
433	2027	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2016	9/30/2066	1,256	3.000%	3.000%					1,256		
434	2027	Minidoka/Palisades	Bureau of Reclamation	9/30/2016	9/30/2066	206	3.000%	3.000%					206		
435	2027	The Dalles	Corps of Engineers	9/30/2016	9/30/2066	4	3.000%	3.000%					4		
436		FY 2027 Subtotal:	-	-	-	529,620	477,782						447,150		1,202
437	2028	Conservation	-	10/31/2015	10/31/2027	25,000	0.732%	0.732%					25,000		
438	2028	Fish and Wildlife	-	3/31/2015	3/31/2028	3,000	2.511%	2.511%					3,000		
439	2028	Fish and Wildlife	-	4/30/2014	2/28/2029	7,000	0.697%	0.697%					6,831		169
440	2028	Fish and Wildlife	-	11/30/2014	3/31/2030	8,000	0.947%	0.947%					7,654		346
441	2028	Corps	-	5/31/2016	5/31/2030	15,000	2.599%	2.599%					14,801		199
442	2028	Bureau Direct	-	7/31/2016	7/31/2030	12,000	2.145%	2.145%					11,679		321
443	2028	Bureau Direct	-	7/31/2016	7/31/2030	25,000	2.145%	2.145%					24,331		669
444	2028	Fish and Wildlife	-	2/29/2016	2/28/2031	4,000	0.697%	0.697%					3,714		286
445	2028	Fish and Wildlife	-	10/31/2015	2/28/2031	4,000	0.697%	0.697%					3,714		286
446	2028	Fish and Wildlife	-	10/31/2015	3/31/2031	5,000	0.947%	0.947%					4,673		327
447	2028	Corps	-	4/30/2016	4/30/2031	53,000	2.661%	2.661%					28,816		614
448	2028	Bureau Direct	-	4/30/2016	4/30/2031	17,000	2.661%	2.661%					16,646		354
449	2028	Bureau Direct	-	9/30/2014	5/31/2032	16,000	0.713%	0.713%					14,488		1,512
450	2028	Bureau Direct	-	9/30/2014	5/31/2032	10,000	0.713%	0.713%					9,055		945
451	2028	Bureau Direct	-	7/31/2017	7/31/2032	13,000	2.180%	2.180%					13,000		
452	2028	Corps	-	7/31/2017	7/31/2032	54,000	2.180%	2.180%					26,796		
453	2028	Bureau Direct	-	8/31/2017	8/31/2032	13,000	2.180%	2.180%					13,000		
454	2028	Corps	-	8/31/2017	8/31/2032	54,000	2.180%	2.180%					26,796		
455	2028	Bureau Direct	-	9/30/2017	9/30/2032	14,000	2.180%	2.180%					14,000		
456	2028	Corps	-	9/30/2017	9/30/2032	55,000	2.180%	2.180%					27,796		
457	2028	Fish and Wildlife	-	9/30/2017	9/30/2032	40,000	2.180%	2.180%					40,000		
458	2028	Bureau Direct	-	9/30/2014	6/30/2033	11,000	0.732%	0.732%					9,611		1,389
459	2028	Bureau Direct	-	9/30/2014	6/30/2033	12,000	0.732%	0.732%					10,485		1,515
460	2028	Bureau Direct	-	2/27/2012	2/28/2034	55,000	0.697%	0.697%					65		11
461	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2017	9/30/2067	63,629	2.380%	2.380%					63,629		
462		FY 2028 Subtotal:	-	-	-	588,629	483,447						419,581		8,942
463	2029	Fish and Wildlife	-	10/31/2014	1/31/2029	15,000	0.674%	0.674%					15,000		
464	2029	Fish and Wildlife	-	8/31/2014	7/31/2029	5,000	0.674%	0.674%					5,000		
465	2029	Fish and Wildlife	-	11/30/2014	3/31/2030	8,000	0.947%	0.947%					0		
466	2029	Bureau Direct	-	9/30/2014	7/31/2033	15,000	0.674%	0.674%					13,416		1,584
467	2029	Bureau Direct	-	2/27/2012	2/28/2034	55,000	0.697%	0.697%					48,423		6,501
468	2029	Bureau Direct	-	6/30/2013	1/31/2039	35,000	0.674%	0.674%					27,255		7,745
469	2029	Corps	-	2/29/2016	2/28/2045	3,000	0.697%	0.697%					2,108		892
470	2029	Replacements	-	3/31/2019	3/31/2064	219,724	3.870%	3.870%					219,724		
471	2029	Replacements	-	3/31/2020	3/31/2065	219,724	3.870%	3.870%					219,724		
472	2029	Replacements	-	3/31/2021	3/31/2066	219,724	3.870%	3.870%					215,556		
473		FY 2029 Subtotal:	-	-	-	795,171	787,095						766,204		16,723
474	2030	Replacements	-	3/31/2021	3/31/2066	219,724	3.870%	3.870%					4,167		
475	2030	Replacements	-	3/31/2022	3/31/2067	219,724	3.870%	3.870%					219,724		
476	2030	Replacements	-	3/31/2023	3/31/2068	219,724	3.870%	3.870%					219,724		
477	2030	Replacements	-	3/31/2024	3/31/2069	219,724	3.870%	3.870%					219,724		
478	2030	Replacements	-	3/31/2025	3/31/2070	219,724	3.870%	3.870%					44,219		
479		FY 2030 Subtotal:	-	-	-	1,098,618	883,061						707,557		
480	2031	Replacements	-	3/31/2025	3/31/2070	219,724	3.870%	3.870%					175,504		
481	2031	Replacements	-	3/31/2026	3/31/2071	219,724	3.870%	3.870%					219,724		
482	2031	Replacements	-	3/31/2027	3/31/2072	219,724	3.870%	3.870%					219,724		
483	2031	Replacements	-	3/31/2028	3/31/2073	219,724	3.870%	3.870%					136,221		
484		FY 2031 Subtotal:	-	-	-	878,894	834,675						751,172		
485	2032	Replacements	-	3/31/2028	3/31/2073	219,724	3.870%	3.870%					83,503		
486	2032	Replacements	-	3/31/2029	3/31/2074	219,724	3.870%	3.870%					219,724		
487	2032	Replacements	-	3/31/2030	3/31/2075	219,724	3.870%	3.870%					219,724		
488	2032	Replacements	-	3/31/2031	3/31/2076	219,724	3.870%	3.870%					219,724		
489		FY 2032 Subtotal:	-	-	-	878,894	742,673						742,673		
490	2033	Replacements	-	3/31/2032	3/31/2077	219,724	3.870%	3.870%					219,724		
491		FY 2033 Subtotal:	-	-	-	219,724	219,724						219,724		
492	2034	Replacements	-	3/31/2033	3/31/2078	219,724	3.870%	3.870%					219,724		
493		FY 2034 Subtotal:	-	-	-	219,724	219,724						219,724		
494	2035	Replacements	-	3/31/2034	3/31/2079	219,724	3.870%	3.870%					219,724		
495		FY 2035 Subtotal:	-	-	-	219,724	219,724						219,724		
496	2036	Replacements	-	3/31/2035	3/31/2080	219,724	3.870%	3.870%					219,724		
497		FY 2036 Subtotal:	-	-	-	219,724	219,724						219,724		
498	2037	Replacements	-	3/31/2036	3/31/2081	219,724	3.870%	3.870%					219,724		

TABLE 11E:
Summary of Interest
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

Obligation Type	General Project	Specific Project	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
		Boise	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		Columbia Basin	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hungry Horse Dam	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Bureau of Reclamation	Minidoka/Palisades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Chandler/Kenniwick	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau of Reclamation Subtotal:	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
		Albeni Falls	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville Dam	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712
		Chief Joseph	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
		Columbia River Fish Mitigation	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782
		Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Appropriation		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Corps of Engineers	Ice Harbor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		John Day	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
		Libby	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
		Little Goose	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Granite	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Lower Monument	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		McNary	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
		The Dalles	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
		Corps of Engineers Subtotal:	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906
	Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		Lower Snake Fish & Wildlife Subtotal:	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Appropriation Subtotal:		3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019
		(Less Interest Income)	(2,042)	(2,107)	(2,108)	(2,131)	(2,203)	(2,208)	(2,223)	(2,223)	(2,223)	(1,956)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)
		Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BPA Borrowing	Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BPA Borrowing Subtotal:	(2,042)	(2,107)	(2,108)	(2,131)	(2,203)	(2,208)	(2,223)	(2,223)	(2,223)	(1,956)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)
	Federal Generation Replacements	Replacements	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503
		Federal Generation Replacements Subtotal:	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503
	Treasury Subtotal:		6,462	6,396	6,395	6,373	6,301	6,296	6,280	6,280	6,280	6,547	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343
Grand Total:			\$9,480	\$9,414	\$9,414	\$9,391	\$9,320	\$9,314	\$9,299	\$9,299	\$9,299	\$9,566	\$10,362	\$10,362	\$10,362	\$10,362	\$10,362	\$10,362	\$10,362	\$10,362

TABLE 11E:
Summary of Interest
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

Obligation Type	General Project	Specific Project	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total
		Boise	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	627
		Columbia Basin	99	99	99	99	99	99	59	-	-	-	-	-	-	-	-	-	21,892
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	903
		Hungry Horse Dam	6	6	6	6	6	6	3	-	-	-	-	-	-	-	-	-	1,904
	Bureau of Reclamation	Minidoka/Palisades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,593
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,311
		Yakima Chandler/Kenniwick	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	200
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
		Bureau of Reclamation Subtotal:	109	109	109	109	109	109	62	-	-	-	-	-	-	-	-	-	37,430
		Albeni Falls	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	424
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,738
		Bonneville Dam	712	712	712	712	712	712	-	-	-	-	-	-	-	-	-	-	53,513
		Chief Joseph	171	171	171	171	171	171	-	-	-	-	-	-	-	-	-	-	15,587
		Columbia River Fish Mitigation	1,782	1,782	1,782	1,782	1,782	1,782	-	-	-	-	-	-	-	-	-	-	512,071
		Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,814
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	495
Appropriation		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,816
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	231
		Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	226
	Corps of Engineers	Ice Harbor	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	4,291
		John Day	68	68	68	68	68	68	68	-	-	-	-	-	-	-	-	-	7,892
		Libby	76	76	76	76	76	76	-	-	-	-	-	-	-	-	-	-	5,036
		Little Goose	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	2,052
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,101
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
		Lower Granite	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	4,961
		Lower Monument	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,534
		McNary	10	10	10	10	10	10	-	-	-	-	-	-	-	-	-	-	3,395
		The Dalles	80	80	80	80	80	80	-	-	-	-	-	-	-	-	-	-	11,898
		Corps of Engineers Subtotal:	2,906	2,906	2,906	2,906	2,906	2,906	70	-	-	-	-	-	-	-	-	-	635,101
	Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	4	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	17,834
		Lower Snake Fish & Wildlife Subtotal:	4	4	4	4	4	4	4	-	-	-	-	-	-	-	-	-	17,834
	Appropriation Subtotal:		3,019	3,019	3,019	3,019	3,019	3,019	132	-	-	-	-	-	-	-	-	-	690,366
		(Less Interest Income)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(73,143)
		Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	217,470
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,057
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(34,721)
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69,169
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,627
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(16,701)
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,594
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	585
	BPA Borrowing	Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(769)
		Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82,119
Treasury		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,979
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(13,697)
		Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96,119
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,985
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(13,983)
		Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,726
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	373
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(464)
		BPA Borrowing Subtotal:	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	(1,160)	388,326
	Federal Generation Replacements	Replacements	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	924,290
		Federal Generation Replacements Subtotal:	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	8,503	924,290
	Treasury Subtotal:		7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	1,312,615
Grand Total:			\$10,362	\$10,362	\$10,362	\$10,362	\$10,362	\$10,362	\$7,475	\$7,343	\$7,343	\$7,343	\$7,343	\$7,343	\$7,343	\$7,343	\$7,343	\$7,343	\$2,002,981

TABLE 11F:
Summary of Amortization
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

Obligation Type	General Project	Specific Project	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Appropriation	Bureau of Reclamation	Boise	3,365	-	-	-	979	-	17	-	-	-	-	-	-	-	-	-	-	
		Columbia Basin	6,927	-	69,226	10,963	929	-	1,987	895	1,723	11	3,083	-	-	-	-	-	-	-
		Columbia Basin 3rd Powerhouse	12,631	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hungry Horse Dam	6,318	552	-	2,951	294	-	-	792	503	3	-	-	-	-	-	-	-	-
		Mindoka/Palsades	50,911	42	-	-	-	-	-	-	-	42	7	19,443	-	-	-	-	-	-
		RRP - Green Springs	-	11,145	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-
		Yakima Chandler/Kenwick	-	-	-	833	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Roza	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau of Reclamation Subtotal:	80,151	11,754	69,226	14,746	2,202	-	2,004	1,687	2,226	22	22,526	-	-	-	-	-	-	-
		Albion Falls	2,510	-	-	-	481	-	-	42	-	-	-	-	-	-	-	-	-	-
	Bonneville 2nd Powerhouse	38,293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Bonneville Dam	3,917	24,446	39,818	21,824	12,875	-	4,606	2,192	10,963	-	370	-	-	-	-	-	-	-	
	Chief Joseph	7,970	-	347	992	-	-	24,727	-	4	28	10	-	-	-	-	-	-	-	
	Columbia River Fish Mitigation	55,768	36,266	86,545	120,479	59,464	301,568	162,091	125,213	147,704	248,802	189,756	63,629	-	-	-	-	-	-	
	Cougar	26	-	3,622	8,130	120	-	230	59	293	4,090	-	-	-	-	-	-	-	-	
	Detroit Lake/Big Cliff	38	-	301	1,254	-	-	-	-	18	-	558	-	-	-	-	-	-	-	
	Dworshak	8,803	-	828	1,474	-	-	2,380	-	-	-	-	-	-	-	-	-	-	-	
	Green Peter/Foster	26	200	-	-	-	-	-	-	385	87	28	138	-	-	-	-	-	-	
	Hills Creek	2,658	8	2	46	-	-	-	-	12	142	-	-	-	-	-	-	-	-	
	Corps of Engineers	Ice Harbor	986	764	9,851	50	-	-	2,615	207	819	115	3,732	-	-	-	-	-	-	
John Day		11,433	619	6,339	2,827	834	-	-	356	175	6,161	181	-	-	-	-	-	-		
Libby		15,441	5,562	-	-	-	-	-	40	152	16	-	-	-	-	-	-	-		
Little Goose		6,102	4,608	94	146	-	-	3,171	30	-	66	-	-	-	-	-	-	-		
Lookout Dam		5,170	-	-	7,490	572	-	-	-	17	294	-	-	-	-	-	-	-		
Lost Creek		118	147	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-		
Lower Granite		1,311	2,025	2,131	434	-	5,669	3,801	8	-	3,475	-	-	-	-	-	-	-		
Lower Monument		2,160	3,301	3,452	549	285	-	2,332	1,430	-	89	155	-	-	-	-	-	-		
McNary		635	1,046	6,138	646	4,080	-	-	759	565	11	1,000	-	-	-	-	-	-		
The Dalles		4,579	-	1,408	36,019	2,170	-	-	-	-	-	305	-	-	-	-	-	-		
Corps of Engineers Subtotal:	167,945	78,991	160,675	202,360	80,881	301,568	207,821	134,530	160,805	255,825	203,837	63,629	-	-	-	-	-			
Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	228,843	325	1,127	102	379	-	1,540	6	343	-	1,256	-	-	-	-	-	-		
	Lower Snake Fish & Wildlife Subtotal:	228,843	325	1,127	102	379	-	1,540	6	343	-	1,256	-	-	-	-	-			
Appropriation Subtotal:		476,940	91,070	231,028	217,209	83,461	301,568	211,365	136,222	163,374	255,847	227,620	63,629	-	-	-	-			
Bond	Bureau Direct		-	-	105,000	145,000	242,000	19,000	-	140,937	120,899	29,000	65,665	136,360	89,093	-	-	-		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Conservation		-	29,000	-	-	19,000	16,000	142,000	97,000	69,000	39,000	6,000	25,000	-	-	-			
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Construction (AS)		-	15,150	5,250	18,100	7,000	5,800	3,150	5,600	-	-	-	-	-	-	-			
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	BPA Borrowing		-	-	-	-	-	-	-	-	104,837	80,866	125,006	2,108	-	-	-			
Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Fish and Wildlife		-	-	46,000	-	20,000	31,000	65,000	49,000	55,532	6,468	67,000	69,586	20,000	-	-				
Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Technology (G)		-	-	-	-	35,000	14,000	5,000	-	-	-	-	-	-	-	-				
Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
BPA Borrowing Subtotal:		-	44,150	156,250	163,100	323,000	85,800	215,150	292,537	245,431	179,306	219,531	355,952	111,201	-	-				
Federal Generation Replacements	Replacements		-	-	-	-	-	-	-	-	-	-	-	-	655,003	707,557	751,172	742,673	219,724	
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Federal Generation Replacements Subtotal:		-	-	-	-	-	-	-	-	-	-	-	-	655,003	707,557	751,172	742,673	219,724	
	Discounts		-	-	-	-	-	-	-	(63)	(101)	-	(1,202)	(8,942)	(16,723)	-	-	-		
Make Whole Call	Premiums		-	-	-	2,759	9,781	-	1,868	2,523	804	63	-	-	-	-	-			
	Make Whole Call Subtotal:		-	-	-	2,759	9,781	-	1,868	2,460	704	63	(1,202)	(8,942)	(16,723)	-	-			
Bond Subtotal:		-	44,150	156,250	163,100	323,000	85,800	215,150	292,600	245,532	179,306	220,733	364,894	782,927	707,557	751,172	742,673	219,724		
Irrigation	Irrigation Assistance	Irrigation Assistance	50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347	
		Irrigation Assistance Subtotal:	50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347	
		Irrigation Subtotal:	50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347	
Grand Total:		\$527,709	\$162,454	\$443,851	\$404,626	\$421,208	\$403,428	\$439,361	\$443,939	\$422,448	\$455,908	\$454,471	\$439,710	\$786,992	\$709,553	\$761,696	\$742,673	\$224,070		

TABLE 11F:
Summary of Amortization
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

Obligation Type	General Project	Specific Project	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	
		Boise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Columbia Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Hungry Horse Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Middika/Palsades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Yakima Chandler/Kennswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Yakima Rosa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bureau of Reclamation Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Albion Falls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bonneville Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Chief Joseph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Columbia River Fish Mitigation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Hill Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Ice Harbor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		John Day	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Libby	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Little Goose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Lower Granite	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Lower Monument	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		McNary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		The Dalles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Corps of Engineers Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Lower Snake Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Lower Snake Fish & Wildlife Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Appropriation Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		BPA Borrowing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		BPA Borrowing Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Replacements	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Federal Generation Replacements Subtotal:	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	
		Discounts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Premiums	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Make Whole Call Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bond Subtotal:	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724
		Irrigation Assistance	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-	-	-	-	
		Irrigation Assistance Subtotal:	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-	-	-	-	
		Irrigation Subtotal:	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-	-	-	-	
Grand Total:			\$219,724	\$227,485	\$248,644	\$235,501	\$219,724	\$233,905	\$219,724	\$219,724	\$293,383	\$219,724	\$219,724	\$231,303	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	

TABLE 11F:
Summary of Amortization
October 1, 2015 - September 30, 2018 Cost Evaluation Period
(\$000s) (FY 2018)

Obligation Type	General Project	Specific Project	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total
		Boise	-	-	-	-	-	64	-	-	-	-	-	-	-	-	-	-	4,425
		Columbia Basin	-	-	-	-	-	835	1,338	-	-	-	-	-	-	-	-	-	97,915
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,631
		Hungry Horse Dam	-	-	-	-	-	76	60	-	-	-	-	-	-	-	-	-	11,549
		Mindoka/Palades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70,403
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,148
		Yakima Chandler/Kennwick	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	848
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
		Bureau of Reclamation Subtotal:	-	-	-	-	-	975	1,414	-	-	-	-	-	-	-	-	-	208,933
		Abeni Falls	-	-	-	-	-	-	57	-	-	-	-	-	-	-	-	-	3,090
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38,293
		Bonneville Dam	-	-	-	-	-	14,609	-	-	-	-	-	-	-	-	-	-	135,618
		Chief Joseph	-	-	-	-	-	3,300	-	-	-	-	-	-	-	-	-	-	37,578
		Columbia River Fish Mitigation	-	-	-	-	-	36,554	-	-	-	-	-	-	-	-	-	-	1,633,638
		Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,710
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,168
		Dwershak	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	13,495
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	863
		Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,867
		Ice Harbor	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	19,152
		John Day	-	-	-	-	-	-	1,548	-	-	-	-	-	-	-	-	-	30,473
		Libby	-	-	-	-	-	1,567	-	-	-	-	-	-	-	-	-	-	22,777
		Little Goose	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	14,231
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,543
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272
		Lower Granite	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	18,878
		Lower Monument	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	13,764
		McNary	-	-	-	-	-	215	-	-	-	-	-	-	-	-	-	-	15,096
		The Dalles	-	-	-	-	-	1,651	-	-	-	-	-	-	-	-	-	-	46,132
		Corps of Engineers Subtotal:	-	-	-	-	-	58,167	1,605	-	-	-	-	-	-	-	-	-	2,078,639
		Lower Snake Fish and Wildlife	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	233,996
		Lower Snake Fish & Wildlife Subtotal:	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	233,996
		Appropriation Subtotal:	-	-	-	-	-	59,216	3,018	-	-	-	-	-	-	-	-	-	2,521,567
		Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,092,955
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,000
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,050
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312,817
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	429,586
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54,000
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BPA Borrowing Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,391,408
		Replacements	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	10,766,452
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Federal Generation Replacements Subtotal:	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	10,766,452
		Discounts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(27,031)
		Premiums	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,398
		Make Whole Call Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(9,233)
		Bond Subtotal:	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	219,724	13,184,891
		Irrigation Assistance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,075
		Irrigation Assistance Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,075
		Irrigation Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,075
		Grand Total:	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$278,939	\$222,742	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$219,724	\$16,148,532

12. REPAYMENT STUDY DATA, FY 2019 STUDY

**TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1	Albeni Falls	09/1955	09/2005	6.910%	25,494	0		
2	Albeni Falls	09/1956	09/2005	6.910%	11	0		
3	Albeni Falls	09/1957	09/2005	6.910%	10	0		
4	Albeni Falls	09/1958	09/2005	6.910%	11	0		
5	Albeni Falls	09/1959	09/2005	6.910%	11	0		
6	Albeni Falls	09/1960	09/2005	6.910%	10	0		
7	Albeni Falls	09/1961	09/2005	6.910%	11	0		
8	Albeni Falls	09/1962	09/2005	6.910%	11	0		
9	Albeni Falls	09/1963	09/2005	6.910%	10	0		
10	Albeni Falls	09/1964	09/2005	6.910%	11	0		
11	Albeni Falls	09/1965	09/2005	6.910%	11	0		
12	Albeni Falls	09/1966	09/2005	6.910%	10	0		
13	Albeni Falls	09/1967	09/2005	6.910%	11	0		
14	Albeni Falls	09/1968	09/2005	6.910%	11	0		
15	Albeni Falls	09/1969	09/2005	6.910%	10	0		
16	Albeni Falls	09/1970	09/2005	6.910%	11	0		
17	Albeni Falls	09/1971	09/2005	6.910%	11	0		
18	Albeni Falls	09/1972	09/2005	6.910%	10	0		
19	Albeni Falls	09/1973	09/2005	6.910%	11	0		
20	Albeni Falls	09/1974	09/2005	6.910%	11	0		
21	Albeni Falls	09/1975	09/2005	6.910%	10	0		
22	Albeni Falls	09/1976	09/2005	6.910%	11	0		
23	Albeni Falls	09/1977	09/2005	6.910%	11	0		
24	Albeni Falls	09/1978	09/2005	6.910%	10	0		
25	Albeni Falls	09/1979	09/2005	6.910%	11	0		
26	Albeni Falls	09/1980	09/2005	6.910%	11	0		
27	Albeni Falls	09/1981	09/2005	6.910%	10	0		
28	Albeni Falls	09/1982	09/2005	6.910%	11	0		
29	Albeni Falls	09/1983	09/2005	6.910%	11	0		
30	Albeni Falls	09/1985	09/2005	6.910%	7	0		
31	Albeni Falls	09/1986	09/2005	6.910%	293	0		
32	Albeni Falls	09/1987	09/2005	6.910%	12	0		
33	Albeni Falls	09/1987	09/2005	8.888%	15	0		
34	Albeni Falls	09/1988	09/2005	8.500%	328	0		
35	Albeni Falls	09/1989	09/2005	9.250%	221	0		
36	Albeni Falls	09/1990	09/2005	8.875%	1,287	0		
37	Albeni Falls	09/1991	09/2005	8.750%	43	0		
38	Albeni Falls	09/1991	09/2005	8.750%	111	0		
39	Albeni Falls	09/1992	09/2005	8.500%	7	0		
40	Albeni Falls	09/1992	09/2005	8.500%	106	0		
41	Albeni Falls	09/1993	09/2005	7.875%	295	0		
42	Albeni Falls	09/1993	09/2005	7.875%	714	0		
43	Albeni Falls	09/1994	09/2019	7.125%	61	0		
44	Albeni Falls	09/1994	09/2019	7.125%	173	0		
45	Albeni Falls	09/1995	09/2010	7.090%	17	0		
46	Albeni Falls	09/1995	09/2010	7.890%	51	0		
47	Albeni Falls	09/1995	09/2045	7.150%	443	443		
48	Albeni Falls	09/1995	09/2045	7.150%	531	531		
49	Albeni Falls	09/1995	09/2045	7.150%	1,105	1,105		
50	Albeni Falls	09/1996	09/2016	7.290%	130	0		
51	Albeni Falls	09/1997	09/2047	7.150%	431	431		
52	Albeni Falls	09/2005	09/2055	5.125%	481	481		
53	Albeni Falls	09/2009	09/2059	4.375%	57	57		
54	Albeni Falls	09/2010	09/2060	4.250%	42	42		
55	Boise	09/1912	09/1962	3.000%	1,249	0		
56	Boise	09/1912	09/1962	3.000%	285	0		
57	Boise	09/1926	09/1976	3.000%	190	0		
58	Boise	09/1926	09/1976	3.000%	832	0		
59	Boise	09/1950	09/2000	3.000%	416	0		
60	Boise	09/1950	09/2000	3.000%	95	0		
61	Boise	09/1951	09/2001	3.000%	1,873	0		
62	Boise	09/1951	09/2001	3.000%	428	0		
63	Boise	09/1952	09/2001	3.000%	11	0		
64	Boise	09/1952	09/2001	3.000%	3	0		
65	Boise	09/1953	09/2001	3.000%	11	0		
66	Boise	09/1953	09/2001	3.000%	3	0		
67	Boise	09/1954	09/2001	3.000%	11	0		
68	Boise	09/1954	09/2001	3.000%	3	0		
69	Boise	09/1955	09/2001	3.000%	11	0		
70	Boise	09/1955	09/2001	3.000%	3	0		
71	Boise	09/1956	09/2001	3.000%	11	0		
72	Boise	09/1956	09/2001	3.000%	3	0		
73	Boise	09/1957	09/2001	3.000%	11	0		
74	Boise	09/1957	09/2001	3.000%	3	0		
75	Boise	09/1958	09/2001	3.000%	11	0		
76	Boise	09/1958	09/2001	3.000%	3	0		
77	Boise	09/1959	09/2001	3.000%	11	0		
78	Boise	09/1959	09/2001	3.000%	3	0		
79	Boise	09/1960	09/2001	3.000%	11	0		
80	Boise	09/1960	09/2001	3.000%	3	0		
81	Boise	09/1961	09/2001	3.000%	11	0		
82	Boise	09/1961	09/2001	3.000%	3	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
83	Boise	09/1962	09/2001	3.000%	11	0		
84	Boise	09/1962	09/2001	3.000%	3	0		
85	Boise	09/1963	09/2001	3.000%	11	0		
86	Boise	09/1963	09/2001	3.000%	3	0		
87	Boise	09/1964	09/2001	3.000%	11	0		
88	Boise	09/1964	09/2001	3.000%	3	0		
89	Boise	09/1965	09/2001	3.000%	11	0		
90	Boise	09/1965	09/2001	3.000%	3	0		
91	Boise	09/1966	09/2001	3.000%	11	0		
92	Boise	09/1966	09/2001	3.000%	3	0		
93	Boise	09/1967	09/2001	3.000%	11	0		
94	Boise	09/1967	09/2001	3.000%	3	0		
95	Boise	09/1968	09/2001	3.000%	11	0		
96	Boise	09/1968	09/2001	3.000%	3	0		
97	Boise	09/1969	09/2001	3.000%	11	0		
98	Boise	09/1969	09/2001	3.000%	3	0		
99	Boise	09/1970	09/2001	3.000%	11	0		
100	Boise	09/1970	09/2001	3.000%	3	0		
101	Boise	09/1971	09/2001	3.000%	11	0		
102	Boise	09/1971	09/2001	3.000%	3	0		
103	Boise	09/1972	09/2001	3.000%	11	0		
104	Boise	09/1972	09/2001	3.000%	3	0		
105	Boise	09/1973	09/2001	3.000%	11	0		
106	Boise	09/1973	09/2001	3.000%	3	0		
107	Boise	09/1974	09/2001	3.000%	11	0		
108	Boise	09/1974	09/2001	3.000%	3	0		
109	Boise	09/1975	09/2001	3.000%	11	0		
110	Boise	09/1975	09/2001	3.000%	3	0		
111	Boise	09/1976	09/2001	3.000%	11	0		
112	Boise	09/1976	09/2001	3.000%	3	0		
113	Boise	09/1977	09/2001	3.000%	11	0		
114	Boise	09/1977	09/2001	3.000%	3	0		
115	Boise	09/1978	09/2001	3.000%	11	0		
116	Boise	09/1978	09/2001	3.000%	3	0		
117	Boise	09/1979	09/2001	3.000%	11	0		
118	Boise	09/1979	09/2001	3.000%	3	0		
119	Boise	09/1980	09/2001	3.000%	18	0		
120	Boise	09/1980	09/2001	3.000%	4	0		
121	Boise	09/1981	09/2001	3.000%	8	0		
122	Boise	09/1981	09/2001	3.000%	2	0		
123	Boise	09/1982	09/2001	3.000%	1	0		
124	Boise	09/1982	09/2001	3.000%	1	0		
125	Boise	09/1983	09/2001	3.000%	1	0		
126	Boise	09/1984	09/2001	10.750%	1,325	0		
127	Boise	09/1984	09/2001	10.750%	303	0		
128	Boise	09/1986	09/2001	6.710%	94	0		
129	Boise	09/1988	09/2001	8.500%	3	0		
130	Boise	09/1989	09/2001	9.250%	3,264	0		
131	Boise	09/1990	09/2001	8.875%	38	0		
132	Boise	09/1991	09/2001	8.750%	50	0		
133	Boise	09/1993	09/2001	7.875%	418	0		
134	Boise	09/1994	09/1999	7.125%	7	0		
135	Boise	09/1996	09/2046	6.950%	7	0		
136	Boise	09/1996	09/2046	7.150%	442	442		
137	Boise	09/1996	09/2046	7.150%	656	656		
138	Boise	09/1997	09/2047	6.950%	9	0		
139	Boise	09/1997	09/2047	7.150%	2,266	2,266		
140	Boise	09/2005	09/2055	5.125%	903	903		
141	Boise	09/2006	09/2056	4.500%	15	15		
142	Boise	09/2007	09/2057	5.000%	76	76		
143	Boise	09/2008	09/2058	4.875%	64	64		
144	Boise	09/2009	09/2059	4.375%	2	2		
145	Boise	09/2015	09/2065	3.250%	0	0		
146	Bonneville 2nd Powerhouse	09/1981	09/2031	7.150%	40,964	0		
147	Bonneville 2nd Powerhouse	09/1981	09/2031	7.150%	455	0		
148	Bonneville 2nd Powerhouse	09/1982	09/2032	7.150%	203,535	0		
149	Bonneville 2nd Powerhouse	09/1982	09/2032	7.150%	2,264	0		
150	Bonneville 2nd Powerhouse	09/1983	09/2033	7.150%	62,409	0		
151	Bonneville 2nd Powerhouse	09/1983	09/2033	7.150%	694	0		
152	Bonneville 2nd Powerhouse	09/1985	09/2033	7.150%	9,138	0		
153	Bonneville 2nd Powerhouse	09/1986	09/2033	7.150%	30,578	21,534		
154	Bonneville 2nd Powerhouse	09/1987	09/2033	7.150%	2,801	2,801		
155	Bonneville 2nd Powerhouse	09/1988	09/2033	7.150%	1,271	1,271		
156	Bonneville 2nd Powerhouse	09/1989	09/2033	7.150%	1,232	1,232		
157	Bonneville 2nd Powerhouse	09/1990	09/2033	7.150%	1,588	1,588		
158	Bonneville 2nd Powerhouse	09/1991	09/2033	8.750%	3,998	0		
159	Bonneville 2nd Powerhouse	09/1991	09/2033	8.750%	26	0		
160	Bonneville 2nd Powerhouse	09/1992	09/2033	8.500%	2,446	0		
161	Bonneville 2nd Powerhouse	09/1993	09/2033	7.875%	3,668	0		
162	Bonneville 2nd Powerhouse	09/1994	09/2044	7.150%	5,700	5,700		
163	Bonneville 2nd Powerhouse	09/1995	09/2045	7.150%	3,791	3,791		
164	Bonneville 2nd Powerhouse	09/1996	09/2046	7.150%	376	376		

**TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
165	Bonneville Dam	09/1938	09/1988	2.500%	11,726	0		
166	Bonneville Dam	09/1938	09/1988	2.500%	130	0		
167	Bonneville Dam	09/1941	09/1991	2.500%	17,589	0		
168	Bonneville Dam	09/1941	09/1991	2.500%	196	0		
169	Bonneville Dam	09/1942	09/1992	2.500%	5,863	0		
170	Bonneville Dam	09/1942	09/1992	2.500%	65	0		
171	Bonneville Dam	09/1943	09/1993	2.500%	17,589	0		
172	Bonneville Dam	09/1943	09/1993	2.500%	196	0		
173	Bonneville Dam	09/1944	09/1994	2.500%	5,860	0		
174	Bonneville Dam	09/1944	09/1994	2.500%	65	0		
175	Bonneville Dam	09/1945	09/1994	2.500%	82	0		
176	Bonneville Dam	09/1945	09/1994	2.500%	1	0		
177	Bonneville Dam	09/1946	09/1994	2.500%	81	0		
178	Bonneville Dam	09/1946	09/1994	2.500%	1	0		
179	Bonneville Dam	09/1947	09/1994	2.500%	82	0		
180	Bonneville Dam	09/1947	09/1994	2.500%	1	0		
181	Bonneville Dam	09/1948	09/1994	2.500%	81	0		
182	Bonneville Dam	09/1948	09/1994	2.500%	1	0		
183	Bonneville Dam	09/1949	09/1994	2.500%	82	0		
184	Bonneville Dam	09/1949	09/1994	2.500%	1	0		
185	Bonneville Dam	09/1950	09/1994	2.500%	81	0		
186	Bonneville Dam	09/1950	09/1994	2.500%	11	0		
187	Bonneville Dam	09/1951	09/1994	2.500%	81	0		
188	Bonneville Dam	09/1951	09/1994	2.500%	11	0		
189	Bonneville Dam	09/1952	09/1994	2.500%	82	0		
190	Bonneville Dam	09/1952	09/1994	2.500%	1	0		
191	Bonneville Dam	09/1953	09/1994	2.500%	81	0		
192	Bonneville Dam	09/1953	09/1994	2.500%	1	0		
193	Bonneville Dam	09/1954	09/1994	2.500%	82	0		
194	Bonneville Dam	09/1954	09/1994	2.500%	1	0		
195	Bonneville Dam	09/1955	09/1994	2.500%	81	0		
196	Bonneville Dam	09/1955	09/1994	2.500%	1	0		
197	Bonneville Dam	09/1956	09/1994	2.500%	81	0		
198	Bonneville Dam	09/1956	09/1994	2.500%	1	0		
199	Bonneville Dam	09/1957	09/1994	2.500%	82	0		
200	Bonneville Dam	09/1957	09/1994	2.500%	1	0		
201	Bonneville Dam	09/1958	09/1994	2.500%	81	0		
202	Bonneville Dam	09/1958	09/1994	2.500%	1	0		
203	Bonneville Dam	09/1959	09/1994	2.500%	82	0		
204	Bonneville Dam	09/1959	09/1994	2.500%	1	0		
205	Bonneville Dam	09/1960	09/1994	2.500%	81	0		
206	Bonneville Dam	09/1960	09/1994	2.500%	1	0		
207	Bonneville Dam	09/1961	09/1994	2.500%	81	0		
208	Bonneville Dam	09/1961	09/1994	2.500%	1	0		
209	Bonneville Dam	09/1962	09/1994	2.500%	82	0		
210	Bonneville Dam	09/1962	09/1994	2.500%	1	0		
211	Bonneville Dam	09/1963	09/1994	2.500%	81	0		
212	Bonneville Dam	09/1963	09/1994	2.500%	1	0		
213	Bonneville Dam	09/1964	09/1994	2.500%	82	0		
214	Bonneville Dam	09/1964	09/1994	2.500%	1	0		
215	Bonneville Dam	09/1965	09/1994	2.500%	81	0		
216	Bonneville Dam	09/1965	09/1994	2.500%	1	0		
217	Bonneville Dam	09/1966	09/1994	2.500%	81	0		
218	Bonneville Dam	09/1966	09/1994	2.500%	1	0		
219	Bonneville Dam	09/1967	09/1994	2.500%	82	0		
220	Bonneville Dam	09/1967	09/1994	2.500%	1	0		
221	Bonneville Dam	09/1968	09/1994	2.500%	81	0		
222	Bonneville Dam	09/1968	09/1994	2.500%	1	0		
223	Bonneville Dam	09/1969	09/1994	2.500%	82	0		
224	Bonneville Dam	09/1969	09/1994	2.500%	1	0		
225	Bonneville Dam	09/1970	09/1994	2.500%	81	0		
226	Bonneville Dam	09/1970	09/1994	2.500%	1	0		
227	Bonneville Dam	09/1971	09/1994	2.500%	81	0		
228	Bonneville Dam	09/1971	09/1994	2.500%	1	0		
229	Bonneville Dam	09/1972	09/1994	2.500%	82	0		
230	Bonneville Dam	09/1972	09/1994	2.500%	1	0		
231	Bonneville Dam	09/1973	09/1994	2.500%	81	0		
232	Bonneville Dam	09/1973	09/1994	2.500%	1	0		
233	Bonneville Dam	09/1974	09/1994	2.500%	82	0		
234	Bonneville Dam	09/1974	09/1994	2.500%	1	0		
235	Bonneville Dam	09/1975	09/1994	2.500%	81	0		
236	Bonneville Dam	09/1975	09/1994	2.500%	1	0		
237	Bonneville Dam	09/1976	09/1994	2.500%	81	0		
238	Bonneville Dam	09/1976	09/1994	2.500%	1	0		
239	Bonneville Dam	09/1977	09/1994	2.500%	82	0		
240	Bonneville Dam	09/1977	09/1994	2.500%	1	0		
241	Bonneville Dam	09/1977	09/2027	7.150%	15,670	0		
242	Bonneville Dam	09/1978	09/1994	2.500%	81	0		
243	Bonneville Dam	09/1978	09/1994	2.500%	1	0		
244	Bonneville Dam	09/1979	09/1994	2.500%	82	0		
245	Bonneville Dam	09/1979	09/1994	2.500%	1	0		
246	Bonneville Dam	09/1980	09/1994	2.500%	81	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
247	Bonneville Dam	09/1980	09/1994	2.500%	1	0		
248	Bonneville Dam	09/1981	09/1994	2.500%	81	0		
249	Bonneville Dam	09/1981	09/1994	2.500%	1	0		
250	Bonneville Dam	09/1982	09/1994	2.500%	82	0		
251	Bonneville Dam	09/1982	09/1994	2.500%	2	0		
252	Bonneville Dam	09/1983	09/1994	2.500%	81	0		
253	Bonneville Dam	09/1983	09/1994	2.500%	1	0		
254	Bonneville Dam	09/1984	09/1994	10.750%	873	0		
255	Bonneville Dam	09/1984	09/1994	10.750%	10	0		
256	Bonneville Dam	09/1985	09/1994	2.500%	119	0		
257	Bonneville Dam	09/1986	09/1994	2.500%	555	0		
258	Bonneville Dam	09/1986	09/1994	11.375%	454	0		
259	Bonneville Dam	09/1987	09/1994	2.500%	260	0		
260	Bonneville Dam	09/1987	09/1994	8.875%	26	0		
261	Bonneville Dam	09/1988	09/1994	8.500%	4,199	0		
262	Bonneville Dam	09/1988	09/1994	8.500%	10	0		
263	Bonneville Dam	09/1989	09/1994	9.250%	877	0		
264	Bonneville Dam	09/1990	09/1994	8.875%	519	0		
265	Bonneville Dam	09/1990	09/1994	8.875%	651	0		
266	Bonneville Dam	09/1991	09/1994	8.750%	35	0		
267	Bonneville Dam	09/1991	09/1994	8.750%	3,193	0		
268	Bonneville Dam	09/1992	09/1994	8.500%	99	0		
269	Bonneville Dam	09/1992	09/1994	8.500%	25	0		
270	Bonneville Dam	09/1993	09/2018	7.880%	5,011	0		
271	Bonneville Dam	09/1994	09/2029	7.125%	536	0		
272	Bonneville Dam	09/1995	09/2000	7.330%	8	0		
273	Bonneville Dam	09/1995	09/2010	7.090%	25	0		
274	Bonneville Dam	09/1995	09/2020	7.250%	20	0		
275	Bonneville Dam	09/1995	09/2020	7.250%	22	0		
276	Bonneville Dam	09/1995	09/2030	7.860%	53	0		
277	Bonneville Dam	09/1995	09/2035	7.860%	98	0		
278	Bonneville Dam	09/1995	09/2045	7.150%	243	243		
279	Bonneville Dam	09/1995	09/2045	7.150%	410	410		
280	Bonneville Dam	09/1995	09/2045	7.150%	440	440		
281	Bonneville Dam	09/1995	09/2045	7.860%	374	0		
282	Bonneville Dam	09/1996	09/2016	7.290%	834	0		
283	Bonneville Dam	09/1996	09/2031	7.150%	22	0		
284	Bonneville Dam	09/1996	09/2046	7.150%	18	18		
285	Bonneville Dam	09/1996	09/2046	7.150%	18	18		
286	Bonneville Dam	09/1996	09/2046	7.150%	80	80		
287	Bonneville Dam	09/1996	09/2046	7.150%	109	109		
288	Bonneville Dam	09/1996	09/2046	7.150%	142	142		
289	Bonneville Dam	09/1996	09/2046	7.150%	223	223		
290	Bonneville Dam	09/1996	09/2046	7.150%	751	751		
291	Bonneville Dam	09/1996	09/2046	7.150%	1,322	1,322		
292	Bonneville Dam	09/1997	09/2022	7.230%	122	0		
293	Bonneville Dam	09/1997	09/2032	7.150%	518	0		
294	Bonneville Dam	09/1997	09/2047	7.150%	161	161		
295	Bonneville Dam	09/1999	09/2049	5.375%	19,368	19,368		
296	Bonneville Dam	09/2000	09/2050	6.125%	24,446	24,446		
297	Bonneville Dam	09/2001	09/2051	5.875%	2,530	2,530		
298	Bonneville Dam	09/2002	09/2052	5.500%	448	448		
299	Bonneville Dam	09/2003	09/2053	5.125%	4,581	4,581		
300	Bonneville Dam	09/2004	09/2054	5.375%	26,741	26,741		
301	Bonneville Dam	09/2005	09/2055	5.125%	19,725	19,725		
302	Bonneville Dam	09/2006	09/2056	4.500%	2,628	2,628		
303	Bonneville Dam	09/2007	09/2057	5.000%	1,124	1,124		
304	Bonneville Dam	09/2008	09/2058	4.875%	14,609	14,609		
305	Bonneville Dam	09/2009	09/2059	4.375%	2,744	2,744		
306	Bonneville Dam	09/2010	09/2060	4.250%	1,425	1,425		
307	Bonneville Dam	09/2011	09/2061	3.750%	10,962	10,962		
308	Bonneville Dam	09/2013	09/2063	2.875%	268	268		
309	Bonneville Dam	09/2014	09/2064	3.875%				
310	Bonneville Dam	09/2015	09/2065	3.250%	102	102		
311	Chief Joseph	09/1955	09/2005	6.910%	29,164	0		
312	Chief Joseph	09/1956	09/2006	6.950%	13,643	0		
313	Chief Joseph	09/1957	09/2007	6.980%	39,586	0		
314	Chief Joseph	09/1958	09/2008	7.020%	31,901	0		
315	Chief Joseph	09/1959	09/2008	7.020%	223	0		
316	Chief Joseph	09/1960	09/2008	7.020%	223	0		
317	Chief Joseph	09/1961	09/2008	7.020%	223	0		
318	Chief Joseph	09/1962	09/2008	7.020%	223	0		
319	Chief Joseph	09/1963	09/2008	7.020%	224	0		
320	Chief Joseph	09/1964	09/2008	7.020%	223	0		
321	Chief Joseph	09/1965	09/2008	7.020%	223	0		
322	Chief Joseph	09/1966	09/2008	7.020%	223	0		
323	Chief Joseph	09/1967	09/2008	7.020%	223	0		
324	Chief Joseph	09/1968	09/2008	7.020%	224	0		
325	Chief Joseph	09/1969	09/2008	7.020%	223	0		
326	Chief Joseph	09/1970	09/2008	7.020%	223	0		
327	Chief Joseph	09/1971	09/2008	7.020%	223	0		
328	Chief Joseph	09/1972	09/2008	7.020%	223	0		

TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
329	Chief Joseph	09/1973	09/2008	7.020%	224	0		
330	Chief Joseph	09/1974	09/2008	7.020%	223	0		
331	Chief Joseph	09/1975	09/2008	7.020%	223	0		
332	Chief Joseph	09/1976	09/2008	7.020%	223	0		
333	Chief Joseph	09/1977	09/2008	7.020%	223	0		
334	Chief Joseph	09/1977	09/2027	7.150%	30,512	0		
335	Chief Joseph	09/1978	09/2008	7.020%	224	0		
336	Chief Joseph	09/1978	09/2028	7.150%	75,669	0		
337	Chief Joseph	09/1979	09/2008	7.020%	223	0		
338	Chief Joseph	09/1979	09/2029	7.150%	60,079	0		
339	Chief Joseph	09/1980	09/2008	7.020%	223	0		
340	Chief Joseph	09/1981	09/2008	7.020%	223	0		
341	Chief Joseph	09/1982	09/2008	7.020%	223	0		
342	Chief Joseph	09/1983	09/2008	7.020%	224	0		
343	Chief Joseph	09/1984	09/2008	10.750%	909	0		
344	Chief Joseph	09/1985	09/2008	7.020%	46	0		
345	Chief Joseph	09/1985	09/2029	7.150%	16,372	0		
346	Chief Joseph	09/1986	09/2029	7.150%	5,363	0		
347	Chief Joseph	09/1987	09/2008	8.875%	104	0		
348	Chief Joseph	09/1987	09/2029	7.150%	3,036	0		
349	Chief Joseph	09/1988	09/2029	7.150%	2,722	0		
350	Chief Joseph	09/1989	09/2008	9.250%	327	0		
351	Chief Joseph	09/1989	09/2029	7.150%	2,227	0		
352	Chief Joseph	09/1990	09/2008	8.875%	1,024	0		
353	Chief Joseph	09/1990	09/2029	7.150%	4,505	0		
354	Chief Joseph	09/1991	09/2008	8.750%	34	0		
355	Chief Joseph	09/1991	09/2008	8.750%	293	0		
356	Chief Joseph	09/1991	09/2029	8.750%	3,840	0		
357	Chief Joseph	09/1992	09/2008	8.500%	142	0		
358	Chief Joseph	09/1992	09/2008	8.500%	717	0		
359	Chief Joseph	09/1992	09/2029	8.500%	2,032	0		
360	Chief Joseph	09/1993	09/2008	7.875%	42	0		
361	Chief Joseph	09/1993	09/2008	7.875%	794	0		
362	Chief Joseph	09/1993	09/2029	7.875%	1,360	0		
363	Chief Joseph	09/1994	09/2029	7.125%	129	0		
364	Chief Joseph	09/1994	09/2029	7.125%	65	0		
365	Chief Joseph	09/1994	09/2044	7.150%	4,280	4,017		
366	Chief Joseph	09/1995	09/2010	7.090%	15	0		
367	Chief Joseph	09/1995	09/2045	7.150%	147	147		
368	Chief Joseph	09/1995	09/2045	7.150%	562	562		
369	Chief Joseph	09/1995	09/2045	7.150%	712	712		
370	Chief Joseph	09/1995	09/2045	7.150%	784	784		
371	Chief Joseph	09/1996	09/2031	7.150%	27	0		
372	Chief Joseph	09/1996	09/2046	7.150%	3	3		
373	Chief Joseph	09/1996	09/2046	7.150%	4	4		
374	Chief Joseph	09/1996	09/2046	7.150%	355	355		
375	Chief Joseph	09/1996	09/2046	7.150%	729	729		
376	Chief Joseph	09/1997	09/2032	7.150%	166	0		
377	Chief Joseph	09/1997	09/2047	7.150%	657	657		
378	Chief Joseph	09/2001	09/2051	5.875%	345	345		
379	Chief Joseph	09/2002	09/2052	5.500%	2	2		
380	Chief Joseph	09/2003	09/2053	5.125%	992	992		
381	Chief Joseph	09/2008	09/2058	4.875%	3,500	3,500		
382	Chief Joseph	09/2009	09/2059	4.375%	24,727	24,727		
383	Chief Joseph	09/2011	09/2061	3.750%	4	4		
384	Chief Joseph	09/2012	09/2062	3.375%	28	28		
385	Chief Joseph	09/2013	09/2063	2.875%	10	10		
386	Columbia Basin	09/1941	09/1991	3.000%	10,919	0		
387	Columbia Basin	09/1941	09/1991	3.000%	1,505	0		
388	Columbia Basin	09/1942	09/1992	3.000%	16,165	0		
389	Columbia Basin	09/1942	09/1992	3.000%	3,011	0		
390	Columbia Basin	09/1943	09/1993	3.000%	8,083	0		
391	Columbia Basin	09/1943	09/1993	3.000%	1,505	0		
392	Columbia Basin	09/1944	09/1994	3.000%	16,165	0		
393	Columbia Basin	09/1944	09/1994	3.000%	3,011	0		
394	Columbia Basin	09/1948	09/1998	3.000%	24,247	0		
395	Columbia Basin	09/1948	09/1998	3.000%	4,516	0		
396	Columbia Basin	09/1949	09/1999	3.000%	24,247	0		
397	Columbia Basin	09/1949	09/1999	3.000%	4,516	0		
398	Columbia Basin	09/1950	09/2000	3.000%	16,165	0		
399	Columbia Basin	09/1950	09/2000	3.000%	3,011	0		
400	Columbia Basin	09/1951	09/2001	6.710%	28,255	0		
401	Columbia Basin	09/1951	09/2001	6.710%	5,790	0		
402	Columbia Basin	09/1952	09/2001	6.710%	258	0		
403	Columbia Basin	09/1952	09/2001	6.710%	48	0		
404	Columbia Basin	09/1953	09/2001	6.710%	258	0		
405	Columbia Basin	09/1953	09/2001	6.710%	48	0		
406	Columbia Basin	09/1954	09/2001	6.710%	258	0		
407	Columbia Basin	09/1954	09/2001	6.710%	48	0		
408	Columbia Basin	09/1955	09/2001	6.710%	258	0		
409	Columbia Basin	09/1955	09/2001	6.710%	48	0		
410	Columbia Basin	09/1956	09/2001	6.710%	259	0		

**TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
411	Columbia Basin	09/1956	09/2001	6.710%	48	0		
412	Columbia Basin	09/1957	09/2001	6.710%	258	0		
413	Columbia Basin	09/1957	09/2001	6.710%	48	0		
414	Columbia Basin	09/1958	09/2001	6.710%	258	0		
415	Columbia Basin	09/1958	09/2001	6.710%	48	0		
416	Columbia Basin	09/1959	09/2001	6.710%	258	0		
417	Columbia Basin	09/1959	09/2001	6.710%	48	0		
418	Columbia Basin	09/1960	09/2001	6.710%	258	0		
419	Columbia Basin	09/1960	09/2001	6.710%	48	0		
420	Columbia Basin	09/1961	09/2001	6.710%	259	0		
421	Columbia Basin	09/1961	09/2001	6.710%	48	0		
422	Columbia Basin	09/1962	09/2001	6.710%	258	0		
423	Columbia Basin	09/1962	09/2001	6.710%	48	0		
424	Columbia Basin	09/1963	09/2001	6.710%	258	0		
425	Columbia Basin	09/1963	09/2001	6.710%	48	0		
426	Columbia Basin	09/1964	09/2001	6.710%	258	0		
427	Columbia Basin	09/1964	09/2001	6.710%	48	0		
428	Columbia Basin	09/1965	09/2001	6.710%	258	0		
429	Columbia Basin	09/1965	09/2001	6.710%	48	0		
430	Columbia Basin	09/1966	09/2001	6.710%	259	0		
431	Columbia Basin	09/1966	09/2001	6.710%	48	0		
432	Columbia Basin	09/1967	09/2001	6.710%	258	0		
433	Columbia Basin	09/1967	09/2001	6.710%	48	0		
434	Columbia Basin	09/1967	09/2017	7.290%	758	0		
435	Columbia Basin	09/1968	09/2001	6.710%	258	0		
436	Columbia Basin	09/1968	09/2001	6.710%	48	0		
437	Columbia Basin	09/1969	09/2001	6.710%	258	0		
438	Columbia Basin	09/1969	09/2001	6.710%	48	0		
439	Columbia Basin	09/1970	09/2001	6.710%	258	0		
440	Columbia Basin	09/1970	09/2001	6.710%	48	0		
441	Columbia Basin	09/1971	09/2001	6.710%	259	0		
442	Columbia Basin	09/1971	09/2001	6.710%	48	0		
443	Columbia Basin	09/1972	09/2001	6.710%	258	0		
444	Columbia Basin	09/1972	09/2001	6.710%	48	0		
445	Columbia Basin	09/1973	09/2001	6.710%	258	0		
446	Columbia Basin	09/1973	09/2001	6.710%	48	0		
447	Columbia Basin	09/1974	09/2001	6.710%	258	0		
448	Columbia Basin	09/1974	09/2001	6.710%	48	0		
449	Columbia Basin	09/1975	09/2001	6.710%	258	0		
450	Columbia Basin	09/1975	09/2001	6.710%	48	0		
451	Columbia Basin	09/1976	09/2001	6.710%	259	0		
452	Columbia Basin	09/1976	09/2001	6.710%	48	0		
453	Columbia Basin	09/1977	09/2001	6.710%	258	0		
454	Columbia Basin	09/1977	09/2001	6.710%	48	0		
455	Columbia Basin	09/1978	09/2001	6.710%	258	0		
456	Columbia Basin	09/1978	09/2001	6.710%	48	0		
457	Columbia Basin	09/1979	09/2001	6.710%	258	0		
458	Columbia Basin	09/1979	09/2001	6.710%	48	0		
459	Columbia Basin	09/1980	09/2001	6.710%	258	0		
460	Columbia Basin	09/1980	09/2001	6.710%	48	0		
461	Columbia Basin	09/1981	09/2001	6.710%	259	0		
462	Columbia Basin	09/1981	09/2001	6.710%	48	0		
463	Columbia Basin	09/1982	09/2001	6.710%	258	0		
464	Columbia Basin	09/1982	09/2001	6.710%	48	0		
465	Columbia Basin	09/1983	09/2001	6.710%	258	0		
466	Columbia Basin	09/1983	09/2001	6.710%	48	0		
467	Columbia Basin	09/1984	09/2001	10.750%	7,815	0		
468	Columbia Basin	09/1984	09/2001	10.750%	1,455	0		
469	Columbia Basin	09/1985	09/2001	6.710%	236	0		
470	Columbia Basin	09/1985	09/2001	6.710%	11	0		
471	Columbia Basin	09/1985	09/2001	12.375%	7,338	0		
472	Columbia Basin	09/1985	09/2001	12.375%	362	0		
473	Columbia Basin	09/1986	09/2001	6.710%	127	0		
474	Columbia Basin	09/1987	09/2001	6.710%	13	0		
475	Columbia Basin	09/1988	09/2001	8.500%	184	0		
476	Columbia Basin	09/1988	09/2001	8.500%	2	0		
477	Columbia Basin	09/1989	09/2001	9.250%	1,166	0		
478	Columbia Basin	09/1990	09/2001	8.875%	928	0		
479	Columbia Basin	09/1991	09/2001	8.750%	177	0		
480	Columbia Basin	09/1991	09/2001	8.750%	1,661	0		
481	Columbia Basin	09/1992	09/2001	8.500%	445	0		
482	Columbia Basin	09/1992	09/2001	8.500%	652	0		
483	Columbia Basin	09/1993	09/2001	6.710%	792	0		
484	Columbia Basin	09/1995	09/2000	6.620%	25	0		
485	Columbia Basin	09/1995	09/2020	7.250%	206	0		
486	Columbia Basin	09/1995	09/2030	7.150%	25	0		
487	Columbia Basin	09/1995	09/2030	7.860%	270	0		
488	Columbia Basin	09/1995	09/2030	7.860%	321	0		
489	Columbia Basin	09/1995	09/2030	7.860%	323	0		
490	Columbia Basin	09/1995	09/2030	7.860%	20	0		
491	Columbia Basin	09/1995	09/2045	7.150%	287	287		
492	Columbia Basin	09/1995	09/2045	7.150%	2,511	2,453		

**TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
493	Columbia Basin	09/1995	09/2045	7.860%	450	0		
494	Columbia Basin	09/1995	09/2045	7.860%	450	0		
495	Columbia Basin	09/1996	09/2026	7.150%	72	0		
496	Columbia Basin	09/1996	09/2031	7.150%	109	0		
497	Columbia Basin	09/1996	09/2031	7.150%	251	0		
498	Columbia Basin	09/1996	09/2046	7.150%	426	426		
499	Columbia Basin	09/1996	09/2046	7.150%	368	368		
500	Columbia Basin	09/1997	09/2047	7.150%	3,393	3,393		
501	Columbia Basin	09/2001	09/2051	5.875%	69,226	69,226		
502	Columbia Basin	09/2005	09/2055	5.125%	10,963	10,963		
503	Columbia Basin	09/2006	09/2056	4.500%	1,987	1,987		
504	Columbia Basin	09/2007	09/2057	5.000%	929	929		
505	Columbia Basin	09/2008	09/2058	4.875%	835	835		
506	Columbia Basin	09/2009	09/2059	4.375%	1,338	1,338		
507	Columbia Basin	09/2010	09/2060	4.250%	877	877		
508	Columbia Basin	09/2011	09/2061	3.750%	1,723	1,723		
509	Columbia Basin	09/2012	09/2062	3.375%	11	11		
510	Columbia Basin	09/2013	09/2063	2.875%	3,083	3,083		
511	Columbia Basin	09/2014	09/2064	3.875%	18	18		
512	Columbia Basin	09/2015	09/2065	3.250%	0	0		
513	Columbia Basin 3rd Powerhouse	09/1975	09/2025	7.160%	47,328	0		
514	Columbia Basin 3rd Powerhouse	09/1975	09/2025	7.160%	8,702	0		
515	Columbia Basin 3rd Powerhouse	09/1976	09/2026	7.150%	41,330	0		
516	Columbia Basin 3rd Powerhouse	09/1976	09/2026	7.150%	8,037	0		
517	Columbia Basin 3rd Powerhouse	09/1977	09/2027	7.150%	42,764	0		
518	Columbia Basin 3rd Powerhouse	09/1977	09/2027	7.150%	7,964	0		
519	Columbia Basin 3rd Powerhouse	09/1978	09/2028	7.150%	42,399	0		
520	Columbia Basin 3rd Powerhouse	09/1978	09/2028	7.150%	7,896	0		
521	Columbia Basin 3rd Powerhouse	09/1979	09/2029	7.150%	84,118	0		
522	Columbia Basin 3rd Powerhouse	09/1979	09/2029	7.150%	15,666	0		
523	Columbia Basin 3rd Powerhouse	09/1983	09/2033	7.150%	712	0		
524	Columbia Basin 3rd Powerhouse	09/1983	09/2033	7.150%	13,003	0		
525	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	16,965	0		
526	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	13,192	0		
527	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	3,160	0		
528	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	2,060	0		
529	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	41,772	0		
530	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	107	0		
531	Columbia Basin 3rd Powerhouse	09/1986	09/2033	7.150%	1,851	0		
532	Columbia Basin 3rd Powerhouse	09/1986	09/2033	7.150%	15,538	0		
533	Columbia Basin 3rd Powerhouse	09/1987	09/2033	7.150%	1,730	0		
534	Columbia Basin 3rd Powerhouse	09/1987	09/2033	7.150%	14,439	0		
535	Columbia Basin 3rd Powerhouse	09/1988	09/2033	7.150%	2,294	0		
536	Columbia Basin 3rd Powerhouse	09/1988	09/2033	7.150%	4,351	0		
537	Columbia Basin 3rd Powerhouse	09/1989	09/2033	7.150%	10,902	0		
538	Columbia Basin 3rd Powerhouse	09/1990	09/2033	7.150%	6,383	0		
539	Columbia Basin 3rd Powerhouse	09/1994	09/2044	7.150%	12,631	12,631		
540	Columbia River Fish Mitigation	09/1991	09/2041	8.500%	3,969	0		
541	Columbia River Fish Mitigation	09/1992	09/2042	8.500%	874	0		
542	Columbia River Fish Mitigation	09/1993	09/2043	8.500%	85,846	0		
543	Columbia River Fish Mitigation	09/1994	09/2044	8.500%	39,454	0		
544	Columbia River Fish Mitigation	09/1995	09/2045	7.150%	43,343	39,282		
545	Columbia River Fish Mitigation	09/1996	09/2046	7.150%	2,431	2,431		
546	Columbia River Fish Mitigation	09/1999	09/2049	5.375%	14,115	14,115		
547	Columbia River Fish Mitigation	09/2000	09/2050	6.125%	47,006	47,006		
548	Columbia River Fish Mitigation	09/2001	09/2051	5.875%	6,168	6,168		
549	Columbia River Fish Mitigation	09/2002	09/2052	5.500%	8,797	8,797		
550	Columbia River Fish Mitigation	09/2003	09/2053	5.125%	68,440	68,440		
551	Columbia River Fish Mitigation	09/2004	09/2054	5.375%	60,581	60,581		
552	Columbia River Fish Mitigation	09/2005	09/2055	5.125%	52,039	52,039		
553	Columbia River Fish Mitigation	09/2006	09/2056	4.500%	366,395	366,395		
554	Columbia River Fish Mitigation	09/2007	09/2057	5.000%	53,525	53,525		
555	Columbia River Fish Mitigation	09/2008	09/2058	4.875%	36,554	36,554		
556	Columbia River Fish Mitigation	09/2009	09/2059	4.375%	103,203	103,203		
557	Columbia River Fish Mitigation	09/2010	09/2060	4.250%	56,832	56,832		
558	Columbia River Fish Mitigation	09/2011	09/2061	3.750%	106,014	106,014		
559	Columbia River Fish Mitigation	09/2012	09/2062	3.375%	101,616	101,616		
560	Columbia River Fish Mitigation	09/2013	09/2063	2.875%	95,274	95,274		
561	Columbia River Fish Mitigation	09/2014	09/2064	3.875%	110,071	110,071		
562	Columbia River Fish Mitigation	09/2015	09/2065	3.250%	64,291	64,291		
563	Columbia River Fish Mitigation	09/2016	09/2066	3.000%	30,190	30,190		
564	Cougar	09/1964	09/2014	7.230%	10,414	0		
565	Cougar	09/1965	09/2014	7.230%	20	0		
566	Cougar	09/1966	09/2014	7.230%	20	0		
567	Cougar	09/1967	09/2014	7.230%	20	0		
568	Cougar	09/1968	09/2014	7.230%	20	0		
569	Cougar	09/1969	09/2014	7.230%	20	0		
570	Cougar	09/1970	09/2014	7.230%	20	0		
571	Cougar	09/1971	09/2014	7.230%	20	0		
572	Cougar	09/1972	09/2014	7.230%	20	0		
573	Cougar	09/1973	09/2014	7.230%	20	0		
574	Cougar	09/1974	09/2014	7.230%	19	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
575	Cougar	09/1975	09/2014	7.230%	20	0		
576	Cougar	09/1976	09/2014	7.230%	20	0		
577	Cougar	09/1977	09/2014	7.230%	20	0		
578	Cougar	09/1978	09/2014	7.230%	20	0		
579	Cougar	09/1979	09/2014	7.230%	20	0		
580	Cougar	09/1980	09/2014	7.230%	20	0		
581	Cougar	09/1981	09/2014	7.230%	20	0		
582	Cougar	09/1982	09/2014	7.230%	20	0		
583	Cougar	09/1983	09/2014	7.230%	20	0		
584	Cougar	09/1984	09/2014	10.750%	1	0		
585	Cougar	09/1985	09/2014	7.230%	1	0		
586	Cougar	09/1986	09/2014	7.230%	104	0		
587	Cougar	09/1986	09/2014	11.375%	55	0		
588	Cougar	09/1987	09/2014	7.230%	45	0		
589	Cougar	09/1988	09/2014	8.500%	2	0		
590	Cougar	09/1989	09/2014	9.250%	6	0		
591	Cougar	09/1990	09/2014	8.875%	10	0		
592	Cougar	09/1991	09/2014	8.750%	1,015	0		
593	Cougar	09/1991	09/2014	8.750%	1	0		
594	Cougar	09/1992	09/2014	8.500%	2	0		
595	Cougar	09/1993	09/2014	7.875%	539	0		
596	Cougar	09/1994	09/2019	7.125%	31	0		
597	Cougar	09/1995	09/2000	7.330%	3	0		
598	Cougar	09/1997	09/2047	7.150%	26	26		
599	Cougar	09/2004	09/2054	5.375%	3,622	3,622		
600	Cougar	09/2005	09/2055	5.125%	8,130	8,130		
601	Cougar	09/2006	09/2056	4.500%	109	109		
602	Cougar	09/2007	09/2057	5.000%	120	120		
603	Cougar	09/2009	09/2059	4.375%	121	121		
604	Cougar	09/2010	09/2060	4.250%	59	59		
605	Cougar	09/2011	09/2061	3.750%	282	282		
606	Cougar	09/2012	09/2062	3.375%	139	139		
607	Cougar	09/2013	09/2063	2.875%	4,088	4,088		
608	Cougar	09/2014	09/2064	3.875%	12	12		
609	Cougar	09/2016	09/2066	3.000%	2	2		
610	Detroit Lake/Big Cliff	09/1953	09/2003	6.840%	12,533	0		
611	Detroit Lake/Big Cliff	09/1954	09/2004	6.880%	20,162	0		
612	Detroit Lake/Big Cliff	09/1955	09/2004	6.880%	18	0		
613	Detroit Lake/Big Cliff	09/1956	09/2004	6.880%	19	0		
614	Detroit Lake/Big Cliff	09/1957	09/2004	6.880%	18	0		
615	Detroit Lake/Big Cliff	09/1958	09/2004	6.880%	19	0		
616	Detroit Lake/Big Cliff	09/1959	09/2004	6.880%	18	0		
617	Detroit Lake/Big Cliff	09/1960	09/2004	6.880%	19	0		
618	Detroit Lake/Big Cliff	09/1961	09/2004	6.880%	18	0		
619	Detroit Lake/Big Cliff	09/1962	09/2004	6.880%	19	0		
620	Detroit Lake/Big Cliff	09/1963	09/2004	6.880%	18	0		
621	Detroit Lake/Big Cliff	09/1964	09/2004	6.880%	19	0		
622	Detroit Lake/Big Cliff	09/1965	09/2004	6.880%	18	0		
623	Detroit Lake/Big Cliff	09/1966	09/2004	6.880%	19	0		
624	Detroit Lake/Big Cliff	09/1967	09/2004	6.880%	18	0		
625	Detroit Lake/Big Cliff	09/1968	09/2004	6.880%	19	0		
626	Detroit Lake/Big Cliff	09/1969	09/2004	6.880%	18	0		
627	Detroit Lake/Big Cliff	09/1970	09/2004	6.880%	19	0		
628	Detroit Lake/Big Cliff	09/1971	09/2004	6.880%	18	0		
629	Detroit Lake/Big Cliff	09/1972	09/2004	6.880%	19	0		
630	Detroit Lake/Big Cliff	09/1973	09/2004	6.880%	18	0		
631	Detroit Lake/Big Cliff	09/1974	09/2004	6.880%	19	0		
632	Detroit Lake/Big Cliff	09/1975	09/2004	6.880%	18	0		
633	Detroit Lake/Big Cliff	09/1976	09/2004	6.880%	19	0		
634	Detroit Lake/Big Cliff	09/1977	09/2004	6.880%	18	0		
635	Detroit Lake/Big Cliff	09/1978	09/2004	6.880%	19	0		
636	Detroit Lake/Big Cliff	09/1979	09/2004	6.880%	18	0		
637	Detroit Lake/Big Cliff	09/1980	09/2004	6.880%	19	0		
638	Detroit Lake/Big Cliff	09/1981	09/2004	6.880%	18	0		
639	Detroit Lake/Big Cliff	09/1982	09/2004	6.880%	19	0		
640	Detroit Lake/Big Cliff	09/1983	09/2004	6.880%	18	0		
641	Detroit Lake/Big Cliff	09/1984	09/2004	10.750%	21	0		
642	Detroit Lake/Big Cliff	09/1985	09/2004	6.880%	6	0		
643	Detroit Lake/Big Cliff	09/1986	09/2004	11.375%	38	0		
644	Detroit Lake/Big Cliff	09/1987	09/2004	6.880%	3	0		
645	Detroit Lake/Big Cliff	09/1987	09/2004	8.875%	233	0		
646	Detroit Lake/Big Cliff	09/1988	09/2004	8.500%	68	0		
647	Detroit Lake/Big Cliff	09/1989	09/2004	9.250%	26	0		
648	Detroit Lake/Big Cliff	09/1990	09/2004	8.875%	115	0		
649	Detroit Lake/Big Cliff	09/1991	09/2004	8.750%	9	0		
650	Detroit Lake/Big Cliff	09/1991	09/2004	8.750%	20	0		
651	Detroit Lake/Big Cliff	09/1992	09/2004	8.500%	8	0		
652	Detroit Lake/Big Cliff	09/1993	09/2004	7.875%	211	0		
653	Detroit Lake/Big Cliff	09/1994	09/1999	7.125%	7	0		
654	Detroit Lake/Big Cliff	09/1995	09/2000	7.330%	13	0		
655	Detroit Lake/Big Cliff	09/1995	09/2045	7.150%	38	38		
656	Detroit Lake/Big Cliff	09/1996	09/2006	6.950%	24	0		

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HISTORICAL INVESTMENTS
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
657	Detroit Lake/Big Cliff	09/2001	09/2051	5.875%	282	282		
658	Detroit Lake/Big Cliff	09/2002	09/2052	5.500%	18	18		
659	Detroit Lake/Big Cliff	09/2003	09/2053	5.125%	223	223		
660	Detroit Lake/Big Cliff	09/2005	09/2055	5.125%	1,031	1,031		
661	Detroit Lake/Big Cliff	09/2013	09/2063	2.875%	528	528		
662	Detroit Lake/Big Cliff	09/2014	09/2064	3.875%	18	18		
663	Detroit Lake/Big Cliff	09/2016	09/2066	3.000%	31	31		
664	Dworshak	09/1973	09/2023	7.190%	138,443	0		
665	Dworshak	09/1973	09/2023	7.190%	836	0		
666	Dworshak	09/1974	09/2023	7.190%	515	0		
667	Dworshak	09/1974	09/2023	7.190%	3	0		
668	Dworshak	09/1975	09/2023	7.190%	518	0		
669	Dworshak	09/1975	09/2023	7.190%	3	0		
670	Dworshak	09/1976	09/2023	7.190%	518	0		
671	Dworshak	09/1976	09/2023	7.190%	3	0		
672	Dworshak	09/1977	09/2023	7.190%	518	0		
673	Dworshak	09/1977	09/2023	7.190%	3	0		
674	Dworshak	09/1978	09/2023	7.190%	518	0		
675	Dworshak	09/1978	09/2023	7.190%	3	0		
676	Dworshak	09/1979	09/2023	7.190%	518	0		
677	Dworshak	09/1979	09/2023	7.190%	3	0		
678	Dworshak	09/1980	09/2023	7.190%	518	0		
679	Dworshak	09/1980	09/2023	7.190%	3	0		
680	Dworshak	09/1981	09/2023	7.190%	518	0		
681	Dworshak	09/1981	09/2023	7.190%	3	0		
682	Dworshak	09/1982	09/2023	7.190%	518	0		
683	Dworshak	09/1982	09/2023	7.190%	3	0		
684	Dworshak	09/1983	09/2023	7.190%	523	0		
685	Dworshak	09/1983	09/2023	7.190%	3	0		
686	Dworshak	09/1984	09/2023	10.750%	2,499	0		
687	Dworshak	09/1984	09/2023	10.750%	15	0		
688	Dworshak	09/1985	09/2023	7.190%	1,141	0		
689	Dworshak	09/1986	09/2023	7.190%	197	0		
690	Dworshak	09/1987	09/2023	7.190%	36	0		
691	Dworshak	09/1987	09/2023	8.875%	65	0		
692	Dworshak	09/1988	09/2023	8.500%	61	0		
693	Dworshak	09/1989	09/2023	9.250%	63	0		
694	Dworshak	09/1990	09/2023	8.875%	245	0		
695	Dworshak	09/1990	09/2023	8.875%	24	0		
696	Dworshak	09/1991	09/2023	8.750%	224	0		
697	Dworshak	09/1992	09/2023	2.625%	4	0		
698	Dworshak	09/1992	09/2023	8.500%	28	0		
699	Dworshak	09/1992	09/2023	8.500%	24	0		
700	Dworshak	09/1993	09/2023	7.875%	41	0		
701	Dworshak	09/1993	09/2023	7.875%	1,872	0		
702	Dworshak	09/1994	09/2029	7.125%	1,351	0		
703	Dworshak	09/1994	09/2029	7.125%	964	0		
704	Dworshak	09/1995	09/2020	7.930%	55	0		
705	Dworshak	09/1995	09/2030	7.150%	218	0		
706	Dworshak	09/1995	09/2045	7.150%	1,162	1,162		
707	Dworshak	09/1996	09/2011	7.130%	107	0		
708	Dworshak	09/1996	09/2021	7.230%	26	0		
709	Dworshak	09/1996	09/2021	7.230%	184	0		
710	Dworshak	09/1996	09/2031	7.150%	6	0		
711	Dworshak	09/1996	09/2031	7.150%	203	0		
712	Dworshak	09/1996	09/2046	7.150%	3	3		
713	Dworshak	09/1996	09/2046	7.150%	4	4		
714	Dworshak	09/1996	09/2046	7.150%	46	46		
715	Dworshak	09/1997	09/2047	7.150%	7,588	7,588		
716	Dworshak	09/1999	09/2049	5.375%	630	630		
717	Dworshak	09/2002	09/2052	5.500%	199	199		
718	Dworshak	09/2003	09/2053	5.125%	761	761		
719	Dworshak	09/2005	09/2055	5.125%	713	713		
720	Dworshak	09/2006	09/2056	4.500%	73	73		
721	Dworshak	09/2008	09/2058	4.875%	10	10		
722	Dworshak	09/2009	09/2059	4.375%	2,307	2,307		
723	Dworshak	09/2014	09/2064	3.875%	50	0		
724	Green Peter/Foster	09/1967	09/2017	7.290%	24,445	0		
725	Green Peter/Foster	09/1968	09/2018	7.280%	12,180	0		
726	Green Peter/Foster	09/1969	09/2018	7.280%	39	0		
727	Green Peter/Foster	09/1970	09/2018	7.280%	40	0		
728	Green Peter/Foster	09/1971	09/2018	7.280%	39	0		
729	Green Peter/Foster	09/1972	09/2018	7.280%	39	0		
730	Green Peter/Foster	09/1973	09/2018	7.280%	39	0		
731	Green Peter/Foster	09/1974	09/2018	7.280%	39	0		
732	Green Peter/Foster	09/1975	09/2018	7.280%	39	0		
733	Green Peter/Foster	09/1976	09/2018	7.280%	39	0		
734	Green Peter/Foster	09/1977	09/2018	7.280%	39	0		
735	Green Peter/Foster	09/1978	09/2018	7.280%	39	0		
736	Green Peter/Foster	09/1979	09/2018	7.280%	39	0		
737	Green Peter/Foster	09/1980	09/2018	7.280%	40	0		
738	Green Peter/Foster	09/1981	09/2018	7.280%	39	0		

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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
739	Green Peter/Foster	09/1982	09/2018	7.280%	39	0		
740	Green Peter/Foster	09/1983	09/2018	7.280%	39	0		
741	Green Peter/Foster	09/1984	09/2018	10.750%	15	0		
742	Green Peter/Foster	09/1985	09/2018	7.280%	16	0		
743	Green Peter/Foster	09/1986	09/2018	7.280%	3	0		
744	Green Peter/Foster	09/1986	09/2018	11.375%	3	0		
745	Green Peter/Foster	09/1987	09/2018	7.280%	1	0		
746	Green Peter/Foster	09/1987	09/2018	8.875%	2	0		
747	Green Peter/Foster	09/1988	09/2018	8.500%	13	0		
748	Green Peter/Foster	09/1989	09/2018	9.250%	24	0		
749	Green Peter/Foster	09/1990	09/2018	8.875%	5	0		
750	Green Peter/Foster	09/1991	09/2018	8.750%	48	0		
751	Green Peter/Foster	09/1992	09/2018	8.500%	2	0		
752	Green Peter/Foster	09/1993	09/2018	7.875%	41	0		
753	Green Peter/Foster	09/1994	09/1999	7.125%	6	0		
754	Green Peter/Foster	09/1995	09/2000	7.330%	4	0		
755	Green Peter/Foster	09/1995	09/2020	7.250%	11	0		
756	Green Peter/Foster	09/1995	09/2020	7.250%	24	0		
757	Green Peter/Foster	09/1996	09/2046	7.150%	26	26		
758	Green Peter/Foster	09/2001	09/2051	5.875%	200	200		
759	Green Peter/Foster	09/2011	09/2061	3.750%	87	87		
760	Green Peter/Foster	09/2012	09/2062	3.375%	28	28		
761	Green Peter/Foster	09/2014	09/2064	3.875%	385	385		
762	Green Peter/Foster	09/2015	09/2065	3.250%	68	68		
763	Green Peter/Foster	09/2016	09/2066	3.000%	70	70		
764	Hills Creek	09/1962	09/2012	7.160%	10,353	0		
765	Hills Creek	09/1963	09/2012	7.160%	12	0		
766	Hills Creek	09/1964	09/2012	7.160%	13	0		
767	Hills Creek	09/1965	09/2012	7.160%	13	0		
768	Hills Creek	09/1966	09/2012	7.160%	13	0		
769	Hills Creek	09/1967	09/2012	7.160%	13	0		
770	Hills Creek	09/1968	09/2012	7.160%	13	0		
771	Hills Creek	09/1969	09/2012	7.160%	13	0		
772	Hills Creek	09/1970	09/2012	7.160%	13	0		
773	Hills Creek	09/1971	09/2012	7.160%	13	0		
774	Hills Creek	09/1972	09/2012	7.160%	13	0		
775	Hills Creek	09/1973	09/2012	7.160%	13	0		
776	Hills Creek	09/1974	09/2012	7.160%	13	0		
777	Hills Creek	09/1975	09/2012	7.160%	13	0		
778	Hills Creek	09/1976	09/2012	7.160%	13	0		
779	Hills Creek	09/1977	09/2012	7.160%	13	0		
780	Hills Creek	09/1978	09/2012	7.160%	13	0		
781	Hills Creek	09/1979	09/2012	7.160%	13	0		
782	Hills Creek	09/1980	09/2012	7.160%	13	0		
783	Hills Creek	09/1981	09/2012	7.160%	13	0		
784	Hills Creek	09/1982	09/2012	7.160%	13	0		
785	Hills Creek	09/1983	09/2012	7.160%	13	0		
786	Hills Creek	09/1984	09/2012	10.750%	52	0		
787	Hills Creek	09/1985	09/2012	7.160%	6	0		
788	Hills Creek	09/1987	09/2012	8.875%	3	0		
789	Hills Creek	09/1988	09/2012	8.500%	3	0		
790	Hills Creek	09/1990	09/2012	8.875%	3	0		
791	Hills Creek	09/1991	09/2012	8.750%	17	0		
792	Hills Creek	09/1992	09/2012	8.500%	1	0		
793	Hills Creek	09/1993	09/2012	7.875%	13	0		
794	Hills Creek	09/1996	09/2046	7.150%	28	28		
795	Hills Creek	09/2000	09/2050	6.125%	2,630	2,630		
796	Hills Creek	09/2001	09/2051	5.875%	8	8		
797	Hills Creek	09/2002	09/2052	5.500%	2	2		
798	Hills Creek	09/2005	09/2055	5.125%	46	46		
799	Hills Creek	09/2011	09/2061	3.750%	12	12		
800	Hills Creek	09/2012	09/2062	3.375%	142	142		
801	Hungry Horse Dam	09/1953	09/2003	6.840%	75,076	0		
802	Hungry Horse Dam	09/1953	09/2003	6.840%	2,126	0		
803	Hungry Horse Dam	09/1954	09/2003	6.840%	17	0		
804	Hungry Horse Dam	09/1954	09/2003	6.840%	1	0		
805	Hungry Horse Dam	09/1955	09/2003	6.840%	17	0		
806	Hungry Horse Dam	09/1955	09/2003	6.840%	1	0		
807	Hungry Horse Dam	09/1956	09/2003	6.840%	17	0		
808	Hungry Horse Dam	09/1956	09/2003	6.840%	1	0		
809	Hungry Horse Dam	09/1957	09/2003	6.840%	18	0		
810	Hungry Horse Dam	09/1957	09/2003	6.840%	1	0		
811	Hungry Horse Dam	09/1958	09/2003	6.840%	18	0		
812	Hungry Horse Dam	09/1958	09/2003	6.840%	1	0		
813	Hungry Horse Dam	09/1959	09/2003	6.840%	18	0		
814	Hungry Horse Dam	09/1959	09/2003	6.840%	1	0		
815	Hungry Horse Dam	09/1960	09/2003	6.840%	18	0		
816	Hungry Horse Dam	09/1960	09/2003	6.840%	1	0		
817	Hungry Horse Dam	09/1961	09/2003	6.840%	18	0		
818	Hungry Horse Dam	09/1961	09/2003	6.840%	1	0		
819	Hungry Horse Dam	09/1962	09/2003	6.840%	18	0		
820	Hungry Horse Dam	09/1962	09/2003	6.840%	1	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
821	Hungry Horse Dam	09/1963	09/2003	6.840%	18	0		
822	Hungry Horse Dam	09/1963	09/2003	6.840%	1	0		
823	Hungry Horse Dam	09/1964	09/2003	6.840%	17	0		
824	Hungry Horse Dam	09/1964	09/2003	6.840%	1	0		
825	Hungry Horse Dam	09/1965	09/2003	6.840%	17	0		
826	Hungry Horse Dam	09/1965	09/2003	6.840%	1	0		
827	Hungry Horse Dam	09/1966	09/2003	6.840%	17	0		
828	Hungry Horse Dam	09/1966	09/2003	6.840%	1	0		
829	Hungry Horse Dam	09/1967	09/2003	6.840%	18	0		
830	Hungry Horse Dam	09/1967	09/2003	6.840%	1	0		
831	Hungry Horse Dam	09/1968	09/2003	6.840%	18	0		
832	Hungry Horse Dam	09/1968	09/2003	6.840%	1	0		
833	Hungry Horse Dam	09/1969	09/2003	6.840%	18	0		
834	Hungry Horse Dam	09/1969	09/2003	6.840%	1	0		
835	Hungry Horse Dam	09/1970	09/2003	6.840%	18	0		
836	Hungry Horse Dam	09/1970	09/2003	6.840%	1	0		
837	Hungry Horse Dam	09/1971	09/2003	6.840%	18	0		
838	Hungry Horse Dam	09/1971	09/2003	6.840%	1	0		
839	Hungry Horse Dam	09/1972	09/2003	6.840%	18	0		
840	Hungry Horse Dam	09/1972	09/2003	6.840%	1	0		
841	Hungry Horse Dam	09/1973	09/2003	6.840%	18	0		
842	Hungry Horse Dam	09/1973	09/2003	6.840%	1	0		
843	Hungry Horse Dam	09/1974	09/2003	6.840%	17	0		
844	Hungry Horse Dam	09/1974	09/2003	6.840%	1	0		
845	Hungry Horse Dam	09/1975	09/2003	6.840%	17	0		
846	Hungry Horse Dam	09/1975	09/2003	6.840%	1	0		
847	Hungry Horse Dam	09/1976	09/2003	6.840%	10	0		
848	Hungry Horse Dam	09/1976	09/2003	6.840%	1	0		
849	Hungry Horse Dam	09/1977	09/2003	6.840%	18	0		
850	Hungry Horse Dam	09/1977	09/2003	6.840%	1	0		
851	Hungry Horse Dam	09/1978	09/2003	6.840%	18	0		
852	Hungry Horse Dam	09/1978	09/2003	6.840%	1	0		
853	Hungry Horse Dam	09/1979	09/2003	6.840%	18	0		
854	Hungry Horse Dam	09/1979	09/2003	6.840%	1	0		
855	Hungry Horse Dam	09/1980	09/2003	6.840%	18	0		
856	Hungry Horse Dam	09/1980	09/2003	6.840%	1	0		
857	Hungry Horse Dam	09/1981	09/2003	6.840%	22	0		
858	Hungry Horse Dam	09/1981	09/2003	6.840%	1	0		
859	Hungry Horse Dam	09/1982	09/2003	6.840%	1	0		
860	Hungry Horse Dam	09/1983	09/2003	6.840%	12	0		
861	Hungry Horse Dam	09/1983	09/2003	6.840%	1	0		
862	Hungry Horse Dam	09/1984	09/2003	10.750%	32	0		
863	Hungry Horse Dam	09/1984	09/2003	10.750%	1	0		
864	Hungry Horse Dam	09/1985	09/2003	12.375%	36	0		
865	Hungry Horse Dam	09/1985	09/2003	12.375%	37	0		
866	Hungry Horse Dam	09/1989	09/2003	9.250%	101	0		
867	Hungry Horse Dam	09/1990	09/2003	8.875%	58	0		
868	Hungry Horse Dam	09/1991	09/2003	8.750%	19	0		
869	Hungry Horse Dam	09/1992	09/2003	8.500%	9	0		
870	Hungry Horse Dam	09/1993	09/2003	7.875%	4,136	0		
871	Hungry Horse Dam	09/1993	09/2003	7.875%	2	0		
872	Hungry Horse Dam	09/1994	09/2019	7.125%	56	0		
873	Hungry Horse Dam	09/1995	09/2000	6.620%	156	0		
874	Hungry Horse Dam	09/1995	09/2000	6.620%	84	0		
875	Hungry Horse Dam	09/1995	09/2020	7.930%	450	0		
876	Hungry Horse Dam	09/1995	09/2030	7.150%	536	0		
877	Hungry Horse Dam	09/1995	09/2030	7.150%	1,198	0		
878	Hungry Horse Dam	09/1995	09/2045	7.150%	6,190	6,190		
879	Hungry Horse Dam	09/1995	09/2045	7.860%	14,354	0		
880	Hungry Horse Dam	09/1996	09/2046	7.150%	15	15		
881	Hungry Horse Dam	09/1996	09/2046	7.150%	2	2		
882	Hungry Horse Dam	09/1997	09/2007	6.950%	154	0		
883	Hungry Horse Dam	09/1997	09/2047	7.150%	111	111		
884	Hungry Horse Dam	09/2001	09/2051	5.875%	552	552		
885	Hungry Horse Dam	09/2005	09/2055	5.125%	2,951	2,951		
886	Hungry Horse Dam	09/2007	09/2057	5.000%	294	294		
887	Hungry Horse Dam	09/2008	09/2058	4.875%	76	76		
888	Hungry Horse Dam	09/2009	09/2059	4.375%	60	60		
889	Hungry Horse Dam	09/2010	09/2060	4.250%	779	779		
890	Hungry Horse Dam	09/2011	09/2061	3.750%	503	503		
891	Hungry Horse Dam	09/2012	09/2062	3.375%	3	3		
892	Hungry Horse Dam	09/2014	09/2064	3.875%	12	12		
893	Hungry Horse Dam	09/2015	09/2065	3.250%				
894	Ice Harbor	09/1962	09/2012	7.160%	664	0		
895	Ice Harbor	09/1962	09/2012	7.160%	59,699	0		
896	Ice Harbor	09/1963	09/2012	7.160%	46	0		
897	Ice Harbor	09/1963	09/2012	7.160%	1	0		
898	Ice Harbor	09/1964	09/2012	7.160%	46	0		
899	Ice Harbor	09/1964	09/2012	7.160%	1	0		
900	Ice Harbor	09/1965	09/2012	7.160%	46	0		
901	Ice Harbor	09/1965	09/2012	7.160%	1	0		
902	Ice Harbor	09/1966	09/2012	7.160%	46	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
903	Ice Harbor	09/1966	09/2012	7.160%	1	0		
904	Ice Harbor	09/1967	09/2012	7.160%	46	0		
905	Ice Harbor	09/1967	09/2012	7.160%	1	0		
906	Ice Harbor	09/1968	09/2012	7.160%	46	0		
907	Ice Harbor	09/1968	09/2012	7.160%	1	0		
908	Ice Harbor	09/1969	09/2012	7.160%	46	0		
909	Ice Harbor	09/1969	09/2012	7.160%	1	0		
910	Ice Harbor	09/1970	09/2012	7.160%	46	0		
911	Ice Harbor	09/1970	09/2012	7.160%	1	0		
912	Ice Harbor	09/1971	09/2012	7.160%	46	0		
913	Ice Harbor	09/1971	09/2012	7.160%	1	0		
914	Ice Harbor	09/1972	09/2012	7.160%	46	0		
915	Ice Harbor	09/1972	09/2012	7.160%	1	0		
916	Ice Harbor	09/1973	09/2012	7.160%	46	0		
917	Ice Harbor	09/1973	09/2012	7.160%	1	0		
918	Ice Harbor	09/1974	09/2012	7.160%	46	0		
919	Ice Harbor	09/1974	09/2012	7.160%	1	0		
920	Ice Harbor	09/1975	09/2012	7.160%	46	0		
921	Ice Harbor	09/1975	09/2012	7.160%	1	0		
922	Ice Harbor	09/1976	09/2012	7.160%	46	0		
923	Ice Harbor	09/1976	09/2012	7.160%	1	0		
924	Ice Harbor	09/1976	09/2026	7.150%	20,472	0		
925	Ice Harbor	09/1976	09/2026	7.150%	228	0		
926	Ice Harbor	09/1977	09/2012	7.160%	46	0		
927	Ice Harbor	09/1977	09/2012	7.160%	1	0		
928	Ice Harbor	09/1978	09/2012	7.160%	46	0		
929	Ice Harbor	09/1978	09/2012	7.160%	1	0		
930	Ice Harbor	09/1979	09/2012	7.160%	46	0		
931	Ice Harbor	09/1979	09/2012	7.160%	1	0		
932	Ice Harbor	09/1980	09/2012	7.160%	46	0		
933	Ice Harbor	09/1980	09/2012	7.160%	1	0		
934	Ice Harbor	09/1981	09/2012	7.160%	46	0		
935	Ice Harbor	09/1981	09/2012	7.160%	1	0		
936	Ice Harbor	09/1982	09/2012	7.160%	46	0		
937	Ice Harbor	09/1982	09/2012	7.160%	1	0		
938	Ice Harbor	09/1983	09/2012	7.160%	46	0		
939	Ice Harbor	09/1983	09/2012	7.160%	1	0		
940	Ice Harbor	09/1985	09/2012	7.160%	41	0		
941	Ice Harbor	09/1985	09/2026	7.150%	21	0		
942	Ice Harbor	09/1986	09/2012	7.160%	137	0		
943	Ice Harbor	09/1987	09/2012	7.160%	3	0		
944	Ice Harbor	09/1987	09/2012	8.875%	71	0		
945	Ice Harbor	09/1987	09/2012	8.875%	1	0		
946	Ice Harbor	09/1988	09/2012	8.500%	8	0		
947	Ice Harbor	09/1988	09/2012	8.500%	57	0		
948	Ice Harbor	09/1989	09/2012	9.250%	51	0		
949	Ice Harbor	09/1990	09/2012	8.875%	427	0		
950	Ice Harbor	09/1991	09/2012	8.750%	348	0		
951	Ice Harbor	09/1992	09/2012	8.500%	177	0		
952	Ice Harbor	09/1993	09/2012	7.875%	3,192	0		
953	Ice Harbor	09/1993	09/2012	7.875%	1,645	0		
954	Ice Harbor	09/1994	09/2029	7.125%	328	0		
955	Ice Harbor	09/1994	09/2029	7.125%	520	0		
956	Ice Harbor	09/1995	09/2000	7.330%	2	0		
957	Ice Harbor	09/1995	09/2019	7.270%	84	0		
958	Ice Harbor	09/1995	09/2019	7.270%	171	0		
959	Ice Harbor	09/1995	09/2019	7.270%	849	0		
960	Ice Harbor	09/1996	09/2031	7.150%	78	0		
961	Ice Harbor	09/1996	09/2041	7.150%	371	371		
962	Ice Harbor	09/1997	09/2022	7.230%	66	0		
963	Ice Harbor	09/1997	09/2047	7.150%	67	67		
964	Ice Harbor	09/1999	09/2049	5.375%	5,516	5,516		
965	Ice Harbor	09/2000	09/2050	6.125%	548	548		
966	Ice Harbor	09/2001	09/2051	5.875%	764	764		
967	Ice Harbor	09/2002	09/2052	5.500%	1,014	1,014		
968	Ice Harbor	09/2003	09/2053	5.125%	50	50		
969	Ice Harbor	09/2004	09/2054	5.375%	3,321	3,321		
970	Ice Harbor	09/2008	09/2058	4.875%	14	14		
971	Ice Harbor	09/2009	09/2059	4.375%	2,615	2,615		
972	Ice Harbor	09/2010	09/2060	4.250%	207	207		
973	Ice Harbor	09/2011	09/2061	3.750%	819	819		
974	Ice Harbor	09/2012	09/2062	3.375%	115	115		
975	Ice Harbor	09/2015	09/2065	3.250%	3,175	3,175		
976	Ice Harbor	09/2016	09/2066	3.000%	558	558		
977	John Day	09/1968	09/2018	7.280%	27,254	0		
978	John Day	09/1969	09/2019	7.270%	96,104	0		
979	John Day	09/1970	09/2020	7.250%	23,656	0		
980	John Day	09/1971	09/2021	7.230%	34,974	0		
981	John Day	09/1972	09/2022	7.210%	11,502	0		
982	John Day	09/1984	09/2022	10.750%	3,677	0		
983	John Day	09/1985	09/2022	7.210%	6,490	0		
984	John Day	09/1985	09/2022	12.375%	1,209	0		

**TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
985	John Day	09/1986	09/2022	7.210%	3,227	0		
986	John Day	09/1986	09/2022	11.375%	713	0		
987	John Day	09/1987	09/2022	7.210%	706	0		
988	John Day	09/1987	09/2022	8.875%	4,353	0		
989	John Day	09/1988	09/2022	8.500%	332	0		
990	John Day	09/1988	09/2022	8.500%	199	0		
991	John Day	09/1989	09/2022	7.210%	30	0		
992	John Day	09/1989	09/2022	9.250%	377	0		
993	John Day	09/1990	09/2022	7.210%	37	0		
994	John Day	09/1990	09/2022	8.875%	543	0		
995	John Day	09/1991	09/2022	8.750%	13,218	0		
996	John Day	09/1991	09/2022	8.750%	144	0		
997	John Day	09/1992	09/2022	7.210%	19	0		
998	John Day	09/1992	09/2022	8.500%	95	0		
999	John Day	09/1993	09/2022	7.875%	7,810	0		
1000	John Day	09/1993	09/2022	7.875%	9,585	0		
1001	John Day	09/1994	09/2019	7.125%	14	0		
1002	John Day	09/1994	09/2029	7.125%	1,252	0		
1003	John Day	09/1995	09/2000	7.330%	2	0		
1004	John Day	09/1995	09/2000	7.330%	9	0		
1005	John Day	09/1995	09/2020	7.250%	79	0		
1006	John Day	09/1995	09/2035	7.150%	22	22		
1007	John Day	09/1995	09/2035	7.150%	52	52		
1008	John Day	09/1995	09/2035	7.150%	121	121		
1009	John Day	09/1995	09/2045	7.150%	37	37		
1010	John Day	09/1995	09/2045	7.150%	608	608		
1011	John Day	09/1995	09/2045	7.150%	7,653	7,653		
1012	John Day	09/1996	09/2011	7.130%	237	0		
1013	John Day	09/1996	09/2016	7.290%	1,072	0		
1014	John Day	09/1997	09/2022	7.230%	133	0		
1015	John Day	09/1997	09/2047	7.150%	179	179		
1016	John Day	09/1999	09/2049	5.375%	3,510	3,510		
1017	John Day	09/2000	09/2050	6.125%	2,761	2,761		
1018	John Day	09/2001	09/2051	5.875%	619	619		
1019	John Day	09/2004	09/2054	5.375%	2,830	2,830		
1020	John Day	09/2005	09/2055	5.125%	2,827	2,827		
1021	John Day	09/2006	09/2056	4.500%	601	601		
1022	John Day	09/2007	09/2057	5.000%	233	233		
1023	John Day	09/2009	09/2059	4.375%	1,548	1,548		
1024	John Day	09/2010	09/2060	4.250%	356	356		
1025	John Day	09/2011	09/2061	3.750%	175	175		
1026	John Day	09/2012	09/2062	3.375%	6,161	6,161		
1027	John Day	09/2013	09/2063	2.875%	17	17		
1028	John Day	09/2015	09/2065	3.250%	163	163		
1029	Libby	09/1975	09/2025	7.160%	54,644	0		
1030	Libby	09/1976	09/2026	7.150%	153,432	0		
1031	Libby	09/1977	09/2026	7.150%	1,465	0		
1032	Libby	09/1978	09/2026	7.150%	1,465	0		
1033	Libby	09/1979	09/2026	7.150%	1,465	0		
1034	Libby	09/1980	09/2026	7.150%	1,465	0		
1035	Libby	09/1981	09/2026	7.150%	1,465	0		
1036	Libby	09/1982	09/2026	7.150%	1,465	0		
1037	Libby	09/1983	09/2026	7.150%	1,465	0		
1038	Libby	09/1984	09/2026	10.750%	104	0		
1039	Libby	09/1985	09/2026	7.150%	518	0		
1040	Libby	09/1986	09/2026	7.150%	283	0		
1041	Libby	09/1987	09/2026	7.150%	2	0		
1042	Libby	09/1988	09/2026	8.505%	35	0		
1043	Libby	09/1988	09/2038	7.150%	18,043	14,781		
1044	Libby	09/1989	09/2026	7.150%	1	0		
1045	Libby	09/1989	09/2026	9.250%	131	0		
1046	Libby	09/1990	09/2026	8.875%	11	0		
1047	Libby	09/1991	09/2026	8.750%	134	0		
1048	Libby	09/1992	09/2026	8.500%	100	0		
1049	Libby	09/1992	09/2026	8.500%	70	0		
1050	Libby	09/1993	09/2026	7.875%	600	0		
1051	Libby	09/1994	09/2029	7.125%	215	0		
1052	Libby	09/1994	09/2029	7.150%	286	0		
1053	Libby	09/1995	09/2030	7.150%	15	0		
1054	Libby	09/1995	09/2030	7.150%	41	0		
1055	Libby	09/1995	09/2030	7.150%	94	0		
1056	Libby	09/1997	09/2022	7.230%	432	0		
1057	Libby	09/1997	09/2047	7.150%	660	660		
1058	Libby	09/2001	09/2051	5.875%	5,562	5,562		
1059	Libby	09/2008	09/2058	4.875%	1,567	1,567		
1060	Libby	09/2010	09/2060	4.250%	40	40		
1061	Libby	09/2011	09/2061	3.750%	152	152		
1062	Libby	09/2012	09/2062	3.375%	16	16		
1063	Little Goose	09/1970	09/2020	7.250%	22,326	0		
1064	Little Goose	09/1971	09/2021	7.230%	42,962	0		
1065	Little Goose	09/1972	09/2021	7.230%	28	0		
1066	Little Goose	09/1973	09/2021	7.230%	29	0		

**TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1067	Little Goose	09/1974	09/2021	7.230%	28	0		
1068	Little Goose	09/1975	09/2021	7.230%	29	0		
1069	Little Goose	09/1976	09/2021	7.230%	28	0		
1070	Little Goose	09/1977	09/2021	7.230%	29	0		
1071	Little Goose	09/1978	09/2021	7.230%	28	0		
1072	Little Goose	09/1978	09/2028	7.150%	49,578	0		
1073	Little Goose	09/1979	09/2021	7.230%	29	0		
1074	Little Goose	09/1980	09/2021	7.230%	28	0		
1075	Little Goose	09/1981	09/2021	7.230%	29	0		
1076	Little Goose	09/1982	09/2021	7.230%	28	0		
1077	Little Goose	09/1983	09/2021	7.230%	29	0		
1078	Little Goose	09/1984	09/2021	10.750%	201	0		
1079	Little Goose	09/1985	09/2021	7.230%	174	0		
1080	Little Goose	09/1985	09/2028	7.150%	47	0		
1081	Little Goose	09/1986	09/2021	7.230%	239	0		
1082	Little Goose	09/1987	09/2021	7.230%	6	0		
1083	Little Goose	09/1987	09/2021	8.875%	72	0		
1084	Little Goose	09/1988	09/2021	8.500%	12	0		
1085	Little Goose	09/1988	09/2021	8.500%	68	0		
1086	Little Goose	09/1989	09/2021	9.250%	77	0		
1087	Little Goose	09/1990	09/2021	8.875%	408	0		
1088	Little Goose	09/1990	09/2021	8.875%	21	0		
1089	Little Goose	09/1991	09/2021	8.750%	266	0		
1090	Little Goose	09/1992	09/2021	8.500%	66	0		
1091	Little Goose	09/1992	09/2021	8.500%	27	0		
1092	Little Goose	09/1993	09/2021	7.875%	276	0		
1093	Little Goose	09/1993	09/2021	7.875%	3,359	0		
1094	Little Goose	09/1994	09/2019	7.125%	37	0		
1095	Little Goose	09/1994	09/2029	7.125%	2,044	0		
1096	Little Goose	09/1995	09/2040	7.150%	17	17		
1097	Little Goose	09/1995	09/2040	7.150%	450	450		
1098	Little Goose	09/1995	09/2040	7.150%	733	733		
1099	Little Goose	09/1996	09/2046	7.150%	10	10		
1100	Little Goose	09/1996	09/2046	7.150%	10	10		
1101	Little Goose	09/1996	09/2046	7.150%	211	211		
1102	Little Goose	09/1996	09/2046	7.150%	241	241		
1103	Little Goose	09/1996	09/2046	7.150%	520	520		
1104	Little Goose	09/1996	09/2046	7.150%	3,909	3,909		
1105	Little Goose	09/1997	09/2047	7.150%	1	1		
1106	Little Goose	09/2001	09/2051	5.875%	4,608	4,608		
1107	Little Goose	09/2002	09/2052	5.500%	27	27		
1108	Little Goose	09/2003	09/2053	5.125%	146	146		
1109	Little Goose	09/2004	09/2054	5.375%	67	67		
1110	Little Goose	09/2008	09/2058	4.875%	13	13		
1111	Little Goose	09/2009	09/2059	4.375%	3,171	3,171		
1112	Little Goose	09/2010	09/2060	4.250%	30	30		
1113	Little Goose	09/2013	09/2063	2.875%	66	66		
1114	Lookout Dam	09/1955	09/2005	6.910%	34,290	0		
1115	Lookout Dam	09/1956	09/2005	6.910%	52	0		
1116	Lookout Dam	09/1957	09/2005	6.910%	51	0		
1117	Lookout Dam	09/1958	09/2005	6.910%	51	0		
1118	Lookout Dam	09/1959	09/2005	6.910%	51	0		
1119	Lookout Dam	09/1960	09/2005	6.910%	51	0		
1120	Lookout Dam	09/1961	09/2005	6.910%	52	0		
1121	Lookout Dam	09/1962	09/2005	6.910%	51	0		
1122	Lookout Dam	09/1963	09/2005	6.910%	51	0		
1123	Lookout Dam	09/1964	09/2005	6.910%	51	0		
1124	Lookout Dam	09/1965	09/2005	6.910%	51	0		
1125	Lookout Dam	09/1966	09/2005	6.910%	51	0		
1126	Lookout Dam	09/1967	09/2005	6.910%	52	0		
1127	Lookout Dam	09/1968	09/2005	6.910%	51	0		
1128	Lookout Dam	09/1969	09/2005	6.910%	51	0		
1129	Lookout Dam	09/1970	09/2005	6.910%	51	0		
1130	Lookout Dam	09/1971	09/2005	6.910%	51	0		
1131	Lookout Dam	09/1972	09/2005	6.910%	51	0		
1132	Lookout Dam	09/1973	09/2005	6.910%	52	0		
1133	Lookout Dam	09/1974	09/2005	6.910%	51	0		
1134	Lookout Dam	09/1975	09/2005	6.910%	51	0		
1135	Lookout Dam	09/1976	09/2005	6.910%	51	0		
1136	Lookout Dam	09/1977	09/2005	6.910%	51	0		
1137	Lookout Dam	09/1978	09/2005	6.910%	51	0		
1138	Lookout Dam	09/1979	09/2005	6.910%	52	0		
1139	Lookout Dam	09/1980	09/2005	6.910%	51	0		
1140	Lookout Dam	09/1981	09/2005	6.910%	51	0		
1141	Lookout Dam	09/1982	09/2005	6.910%	51	0		
1142	Lookout Dam	09/1983	09/2005	6.910%	51	0		
1143	Lookout Dam	09/1984	09/2005	10.750%	185	0		
1144	Lookout Dam	09/1985	09/2005	6.910%	52	0		
1145	Lookout Dam	09/1986	09/2005	6.910%	42	0		
1146	Lookout Dam	09/1987	09/2005	6.910%	9	0		
1147	Lookout Dam	09/1987	09/2005	8.875%	12	0		
1148	Lookout Dam	09/1988	09/2005	8.500%	46	0		

**TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1149	Lookout Dam	09/1988	09/2005	8.500%	17	0		
1150	Lookout Dam	09/1989	09/2005	9.250%	23	0		
1151	Lookout Dam	09/1990	09/2005	8.875%	147	0		
1152	Lookout Dam	09/1990	09/2005	8.875%	4	0		
1153	Lookout Dam	09/1991	09/2005	8.750%	6	0		
1154	Lookout Dam	09/1991	09/2005	8.750%	50	0		
1155	Lookout Dam	09/1992	09/2005	8.500%	181	0		
1156	Lookout Dam	09/1992	09/2005	8.500%	4	0		
1157	Lookout Dam	09/1993	09/2005	7.875%	18	0		
1158	Lookout Dam	09/1993	09/2005	7.875%	189	0		
1159	Lookout Dam	09/1994	09/2019	7.125%	73	0		
1160	Lookout Dam	09/1995	09/2045	7.150%	80	39		
1161	Lookout Dam	09/1995	09/2045	7.150%	33	33		
1162	Lookout Dam	09/1995	09/2045	7.860%	9	0		
1163	Lookout Dam	09/1995	09/2045	7.860%	15	0		
1164	Lookout Dam	09/1995	09/2045	7.860%	31	0		
1165	Lookout Dam	09/1995	09/2045	7.860%	157	0		
1166	Lookout Dam	09/2000	09/2050	6.125%	5,098	5,098		
1167	Lookout Dam	09/2003	09/2053	5.125%	135	135		
1168	Lookout Dam	09/2005	09/2055	5.125%	7,355	7,355		
1169	Lookout Dam	09/2007	09/2057	5.000%	572	572		
1170	Lookout Dam	09/2011	09/2061	3.750%	17	17		
1171	Lookout Dam	09/2012	09/2062	3.375%	294	294		
1172	Lost Creek	09/1977	09/2027	7.150%	14,293	0		
1173	Lost Creek	09/1978	09/2027	7.150%	58	0		
1174	Lost Creek	09/1979	09/2027	7.150%	60	0		
1175	Lost Creek	09/1980	09/2027	7.150%	60	0		
1176	Lost Creek	09/1981	09/2027	7.150%	60	0		
1177	Lost Creek	09/1982	09/2027	7.150%	60	0		
1178	Lost Creek	09/1983	09/2027	7.150%	60	0		
1179	Lost Creek	09/1984	09/2027	10.750%	243	0		
1180	Lost Creek	09/1985	09/2027	7.150%	12	0		
1181	Lost Creek	09/1986	09/2027	7.150%	6	0		
1182	Lost Creek	09/1986	09/2027	11.375%	5	0		
1183	Lost Creek	09/1987	09/2027	7.150%	4	0		
1184	Lost Creek	09/1987	09/2027	8.875%	3	0		
1185	Lost Creek	09/1988	09/2027	8.500%	7	0		
1186	Lost Creek	09/1989	09/2027	9.250%	9	0		
1187	Lost Creek	09/1990	09/2027	8.875%	1	0		
1188	Lost Creek	09/1991	09/2027	8.750%	31	0		
1189	Lost Creek	09/1992	09/2027	8.500%	1	0		
1190	Lost Creek	09/1992	09/2027	8.500%	1	0		
1191	Lost Creek	09/1993	09/2027	7.875%	1	0		
1192	Lost Creek	09/1993	09/2027	7.875%	14	0		
1193	Lost Creek	09/1995	09/2000	7.330%	4	0		
1194	Lost Creek	09/1995	09/2045	7.150%	94	94		
1195	Lost Creek	09/1996	09/2031	7.150%	31	0		
1196	Lost Creek	09/1996	09/2046	7.150%	24	24		
1197	Lost Creek	09/2001	09/2051	5.875%	147	147		
1198	Lost Creek	09/2011	09/2061	3.750%	7	7		
1199	Lower Granite	09/1975	09/2025	7.160%	119,237	0		
1200	Lower Granite	09/1976	09/2025	7.160%	510	0		
1201	Lower Granite	09/1977	09/2025	7.160%	510	0		
1202	Lower Granite	09/1978	09/2025	7.160%	510	0		
1203	Lower Granite	09/1978	09/2028	7.150%	40,611	0		
1204	Lower Granite	09/1979	09/2025	7.160%	510	0		
1205	Lower Granite	09/1980	09/2025	7.160%	510	0		
1206	Lower Granite	09/1981	09/2025	7.160%	510	0		
1207	Lower Granite	09/1982	09/2025	7.160%	510	0		
1208	Lower Granite	09/1983	09/2025	7.160%	510	0		
1209	Lower Granite	09/1984	09/2025	10.750%	311	0		
1210	Lower Granite	09/1985	09/2025	7.160%	328	0		
1211	Lower Granite	09/1986	09/2025	7.160%	215	0		
1212	Lower Granite	09/1986	09/2025	11.375%	4	0		
1213	Lower Granite	09/1987	09/2025	7.160%	8	0		
1214	Lower Granite	09/1987	09/2025	8.875%	60	0		
1215	Lower Granite	09/1988	09/2025	8.500%	22	0		
1216	Lower Granite	09/1988	09/2025	8.500%	95	0		
1217	Lower Granite	09/1989	09/2025	9.250%	112	0		
1218	Lower Granite	09/1990	09/2025	8.875%	392	0		
1219	Lower Granite	09/1991	09/2025	8.750%	281	0		
1220	Lower Granite	09/1991	09/2025	8.750%	6	0		
1221	Lower Granite	09/1992	09/2025	8.500%	83	0		
1222	Lower Granite	09/1992	09/2025	8.500%	121	0		
1223	Lower Granite	09/1993	09/2025	7.875%	26	0		
1224	Lower Granite	09/1993	09/2025	7.875%	3,272	0		
1225	Lower Granite	09/1994	09/2019	7.125%	38	0		
1226	Lower Granite	09/1994	09/2029	7.150%	3,543	0		
1227	Lower Granite	09/1995	09/2017	7.290%	77	0		
1228	Lower Granite	09/1995	09/2017	7.290%	388	0		
1229	Lower Granite	09/1995	09/2017	7.290%	458	0		
1230	Lower Granite	09/1995	09/2025	7.160%	96	0		

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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1231	Lower Granite	09/1996	09/2011	7.130%	255	0		
1232	Lower Granite	09/1996	09/2031	7.150%	206	0		
1233	Lower Granite	09/1996	09/2046	7.150%	9	9		
1234	Lower Granite	09/1996	09/2046	7.150%	625	625		
1235	Lower Granite	09/1997	09/2047	7.150%	677	677		
1236	Lower Granite	09/1999	09/2049	5.375%	856	856		
1237	Lower Granite	09/2001	09/2051	5.875%	2,025	2,025		
1238	Lower Granite	09/2002	09/2052	5.500%	1,275	1,275		
1239	Lower Granite	09/2003	09/2053	5.125%	42	42		
1240	Lower Granite	09/2005	09/2055	5.125%	393	393		
1241	Lower Granite	09/2008	09/2058	4.875%	24	24		
1242	Lower Granite	09/2009	09/2059	4.375%	5,669	5,669		
1243	Lower Granite	09/2010	09/2060	4.250%	1,156	1,156		
1244	Lower Granite	09/2011	09/2061	3.750%	8	8		
1245	Lower Granite	09/2014	09/2064	3.875%	2,644	2,644		
1246	Lower Granite	09/2015	09/2065	3.250%	1,597	1,597		
1247	Lower Granite	09/2016	09/2066	3.000%	1,878	1,878		
1248	Lower Monument	09/1969	09/2019	7.270%	26,974	0		
1249	Lower Monument	09/1970	09/2020	7.250%	51,218	0		
1250	Lower Monument	09/1971	09/2020	7.250%	214	0		
1251	Lower Monument	09/1972	09/2020	7.250%	214	0		
1252	Lower Monument	09/1973	09/2020	7.250%	214	0		
1253	Lower Monument	09/1974	09/2020	7.250%	214	0		
1254	Lower Monument	09/1975	09/2020	7.250%	214	0		
1255	Lower Monument	09/1976	09/2020	7.250%	214	0		
1256	Lower Monument	09/1977	09/2020	7.250%	214	0		
1257	Lower Monument	09/1978	09/2020	7.250%	214	0		
1258	Lower Monument	09/1979	09/2020	7.250%	214	0		
1259	Lower Monument	09/1979	09/2029	7.150%	40,669	0		
1260	Lower Monument	09/1980	09/2020	7.250%	214	0		
1261	Lower Monument	09/1981	09/2020	7.250%	214	0		
1262	Lower Monument	09/1982	09/2020	7.250%	214	0		
1263	Lower Monument	09/1983	09/2020	7.250%	214	0		
1264	Lower Monument	09/1985	09/2020	7.250%	8	0		
1265	Lower Monument	09/1985	09/2029	7.150%	256	0		
1266	Lower Monument	09/1986	09/2020	7.250%	132	0		
1267	Lower Monument	09/1987	09/2020	7.250%	3	0		
1268	Lower Monument	09/1987	09/2020	8.875%	50	0		
1269	Lower Monument	09/1988	09/2020	8.500%	1	0		
1270	Lower Monument	09/1988	09/2020	8.500%	58	0		
1271	Lower Monument	09/1989	09/2020	9.250%	93	0		
1272	Lower Monument	09/1990	09/2020	8.875%	358	0		
1273	Lower Monument	09/1991	09/2020	8.750%	594	0		
1274	Lower Monument	09/1992	09/2020	8.500%	4,484	0		
1275	Lower Monument	09/1993	09/2020	7.875%	24	0		
1276	Lower Monument	09/1993	09/2020	7.875%	2,175	0		
1277	Lower Monument	09/1994	09/2019	7.125%	107	0		
1278	Lower Monument	09/1994	09/2029	7.125%	2,167	0		
1279	Lower Monument	09/1995	09/2000	7.330%	6	0		
1280	Lower Monument	09/1995	09/2045	7.150%	41	41		
1281	Lower Monument	09/1995	09/2045	7.150%	99	99		
1282	Lower Monument	09/1995	09/2045	7.150%	624	624		
1283	Lower Monument	09/1995	09/2045	7.150%	1,122	1,122		
1284	Lower Monument	09/1996	09/2016	7.290%	668	0		
1285	Lower Monument	09/1996	09/2021	7.230%	37	0		
1286	Lower Monument	09/1996	09/2021	7.230%	51	0		
1287	Lower Monument	09/1996	09/2036	7.150%	264	264		
1288	Lower Monument	09/1996	09/2046	7.150%	10	10		
1289	Lower Monument	09/2001	09/2051	5.875%	3,301	3,301		
1290	Lower Monument	09/2002	09/2052	5.500%	29	29		
1291	Lower Monument	09/2003	09/2053	5.125%	22	22		
1292	Lower Monument	09/2004	09/2054	5.375%	3,423	3,423		
1293	Lower Monument	09/2005	09/2055	5.125%	527	527		
1294	Lower Monument	09/2006	09/2056	4.500%	285	285		
1295	Lower Monument	09/2008	09/2058	4.875%	9	9		
1296	Lower Monument	09/2009	09/2059	4.375%	2,332	2,332		
1297	Lower Monument	09/2012	09/2062	3.375%	89	89		
1298	Lower Monument	09/2014	09/2064	3.875%	1,430	1,430		
1299	Lower Monument	09/2016	09/2066	3.000%	155	155		
1300	Lower Snake Fish and Wildlife	09/1983	09/2033	7.150%	30,488	9,472		
1301	Lower Snake Fish and Wildlife	09/1985	09/2035	7.150%	47,921	47,921		
1302	Lower Snake Fish and Wildlife	09/1987	09/2037	7.150%	72,536	72,536		
1303	Lower Snake Fish and Wildlife	09/1988	09/2038	7.150%	805	805		
1304	Lower Snake Fish and Wildlife	09/1990	09/2040	7.150%	1,557	1,557		
1305	Lower Snake Fish and Wildlife	09/1991	09/2041	7.150%	4,411	4,411		
1306	Lower Snake Fish and Wildlife	09/1993	09/2043	7.150%	71,632	71,632		
1307	Lower Snake Fish and Wildlife	09/1994	09/2044	7.150%	4,722	4,722		
1308	Lower Snake Fish and Wildlife	09/1996	09/2046	7.150%	12,085	12,085		
1309	Lower Snake Fish and Wildlife	09/1997	09/2047	7.150%	2,173	2,173		
1310	Lower Snake Fish and Wildlife	09/1999	09/2049	5.375%	7	7		
1311	Lower Snake Fish and Wildlife	09/2000	09/2050	6.125%	1,529	1,529		
1312	Lower Snake Fish and Wildlife	09/2001	09/2051	5.875%	325	325		

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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1313	Lower Snake Fish and Wildlife	09/2002	09/2052	5.500%	890	890		
1314	Lower Snake Fish and Wildlife	09/2003	09/2053	5.125%	98	98		
1315	Lower Snake Fish and Wildlife	09/2004	09/2054	5.375%	230	230		
1316	Lower Snake Fish and Wildlife	09/2005	09/2055	5.125%	4	4		
1317	Lower Snake Fish and Wildlife	09/2006	09/2056	4.500%	379	379		
1318	Lower Snake Fish and Wildlife	09/2008	09/2058	4.875%	74	74		
1319	Lower Snake Fish and Wildlife	09/2009	09/2059	4.375%	1,540	1,540		
1320	Lower Snake Fish and Wildlife	09/2010	09/2060	4.250%	6	6		
1321	Lower Snake Fish and Wildlife	09/2011	09/2061	3.750%	122	122		
1322	Lower Snake Fish and Wildlife	09/2014	09/2064	3.875%	222	222		
1323	Lower Snake Fish and Wildlife	09/2016	09/2066	3.000%	1,256	1,256		
1324	McNary	09/1954	09/2004	6.880%	80,256	0		
1325	McNary	09/1955	09/2005	6.910%	53,493	0		
1326	McNary	09/1956	09/2006	6.950%	38,748	0		
1327	McNary	09/1957	09/2007	6.980%	24,985	0		
1328	McNary	09/1958	09/2007	6.980%	468	0		
1329	McNary	09/1959	09/2007	6.980%	468	0		
1330	McNary	09/1960	09/2007	6.980%	468	0		
1331	McNary	09/1961	09/2007	6.980%	468	0		
1332	McNary	09/1962	09/2007	6.980%	467	0		
1333	McNary	09/1963	09/2007	6.980%	468	0		
1334	McNary	09/1964	09/2007	6.980%	468	0		
1335	McNary	09/1965	09/2007	6.980%	468	0		
1336	McNary	09/1966	09/2007	6.980%	468	0		
1337	McNary	09/1967	09/2007	6.980%	467	0		
1338	McNary	09/1968	09/2007	6.980%	468	0		
1339	McNary	09/1969	09/2007	6.980%	468	0		
1340	McNary	09/1970	09/2007	6.980%	468	0		
1341	McNary	09/1971	09/2007	6.980%	468	0		
1342	McNary	09/1972	09/2007	6.980%	468	0		
1343	McNary	09/1973	09/2007	6.980%	467	0		
1344	McNary	09/1974	09/2007	6.980%	468	0		
1345	McNary	09/1975	09/2007	6.980%	468	0		
1346	McNary	09/1976	09/2007	6.980%	468	0		
1347	McNary	09/1977	09/2007	6.980%	467	0		
1348	McNary	09/1978	09/2007	6.980%	468	0		
1349	McNary	09/1979	09/2007	6.980%	468	0		
1350	McNary	09/1980	09/2007	6.980%	468	0		
1351	McNary	09/1981	09/2007	6.980%	468	0		
1352	McNary	09/1982	09/2007	6.980%	467	0		
1353	McNary	09/1983	09/2007	6.980%	468	0		
1354	McNary	09/1985	09/2007	6.980%	557	0		
1355	McNary	09/1986	09/2007	6.980%	454	0		
1356	McNary	09/1987	09/2007	6.980%	24	0		
1357	McNary	09/1995	09/2010	7.090%	509	0		
1358	McNary	09/1995	09/2045	7.150%	16	16		
1359	McNary	09/1996	09/2006	6.950%	778	0		
1360	McNary	09/1996	09/2011	7.130%	3	0		
1361	McNary	09/1996	09/2026	7.150%	74	0		
1362	McNary	09/1996	09/2026	7.150%	277	0		
1363	McNary	09/1996	09/2046	7.150%	619	619		
1364	McNary	09/1997	09/2032	7.150%	30	0		
1365	McNary	09/2001	09/2051	5.875%	1,046	1,046		
1366	McNary	09/2003	09/2053	5.125%	97	97		
1367	McNary	09/2004	09/2054	5.375%	6,138	6,138		
1368	McNary	09/2005	09/2055	5.125%	550	550		
1369	McNary	09/2006	09/2056	4.500%	4,080	4,080		
1370	McNary	09/2008	09/2058	4.875%	215	215		
1371	McNary	09/2011	09/2061	3.750%	565	565		
1372	McNary	09/2012	09/2062	3.375%	11	11		
1373	McNary	09/2013	09/2063	2.875%	1,000	1,000		
1374	McNary	09/2014	09/2064	3.875%	759	759		
1375	Minidoka/Palisades	09/1909	09/1959	3.000%	854	0		
1376	Minidoka/Palisades	09/1909	09/1959	3.000%	226	0		
1377	Minidoka/Palisades	09/1910	09/1960	3.000%	1,709	0		
1378	Minidoka/Palisades	09/1910	09/1960	3.000%	451	0		
1379	Minidoka/Palisades	09/1911	09/1961	3.000%	1,709	0		
1380	Minidoka/Palisades	09/1911	09/1961	3.000%	451	0		
1381	Minidoka/Palisades	09/1927	09/1977	3.000%	854	0		
1382	Minidoka/Palisades	09/1927	09/1977	3.000%	226	0		
1383	Minidoka/Palisades	09/1942	09/1992	3.000%	854	0		
1384	Minidoka/Palisades	09/1942	09/1992	3.000%	226	0		
1385	Minidoka/Palisades	09/1957	09/2007	3.000%	2,561	0		
1386	Minidoka/Palisades	09/1957	09/2007	3.000%	677	0		
1387	Minidoka/Palisades	09/1958	09/2008	3.000%	854	0		
1388	Minidoka/Palisades	09/1958	09/2008	3.000%	226	0		
1389	Minidoka/Palisades	09/1959	09/2008	3.000%	108	0		
1390	Minidoka/Palisades	09/1959	09/2008	3.000%	28	0		
1391	Minidoka/Palisades	09/1960	09/2008	3.000%	108	0		
1392	Minidoka/Palisades	09/1960	09/2008	3.000%	29	0		
1393	Minidoka/Palisades	09/1961	09/2008	3.000%	108	0		
1394	Minidoka/Palisades	09/1961	09/2008	3.000%	29	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1395	Minidoka/Palisades	09/1962	09/2008	3.000%	108	0		
1396	Minidoka/Palisades	09/1962	09/2008	3.000%	28	0		
1397	Minidoka/Palisades	09/1963	09/2008	3.000%	108	0		
1398	Minidoka/Palisades	09/1963	09/2008	3.000%	29	0		
1399	Minidoka/Palisades	09/1964	09/2008	3.000%	108	0		
1400	Minidoka/Palisades	09/1964	09/2008	3.000%	28	0		
1401	Minidoka/Palisades	09/1965	09/2008	3.000%	108	0		
1402	Minidoka/Palisades	09/1965	09/2008	3.000%	29	0		
1403	Minidoka/Palisades	09/1966	09/2008	3.000%	108	0		
1404	Minidoka/Palisades	09/1966	09/2008	3.000%	29	0		
1405	Minidoka/Palisades	09/1967	09/2008	3.000%	108	0		
1406	Minidoka/Palisades	09/1967	09/2008	3.000%	28	0		
1407	Minidoka/Palisades	09/1968	09/2008	3.000%	108	0		
1408	Minidoka/Palisades	09/1968	09/2008	3.000%	29	0		
1409	Minidoka/Palisades	09/1969	09/2008	3.000%	3	0		
1410	Minidoka/Palisades	09/1969	09/2008	3.000%	28	0		
1411	Minidoka/Palisades	09/1970	09/2008	3.000%	108	0		
1412	Minidoka/Palisades	09/1970	09/2008	3.000%	29	0		
1413	Minidoka/Palisades	09/1971	09/2008	3.000%	108	0		
1414	Minidoka/Palisades	09/1971	09/2008	3.000%	29	0		
1415	Minidoka/Palisades	09/1972	09/2008	3.000%	108	0		
1416	Minidoka/Palisades	09/1972	09/2008	3.000%	28	0		
1417	Minidoka/Palisades	09/1973	09/2008	3.000%	108	0		
1418	Minidoka/Palisades	09/1973	09/2008	3.000%	29	0		
1419	Minidoka/Palisades	09/1974	09/2008	3.000%	108	0		
1420	Minidoka/Palisades	09/1974	09/2008	3.000%	28	0		
1421	Minidoka/Palisades	09/1975	09/2008	3.000%	108	0		
1422	Minidoka/Palisades	09/1975	09/2008	3.000%	29	0		
1423	Minidoka/Palisades	09/1976	09/2008	3.000%	108	0		
1424	Minidoka/Palisades	09/1976	09/2008	3.000%	29	0		
1425	Minidoka/Palisades	09/1977	09/2008	7.020%	83	0		
1426	Minidoka/Palisades	09/1977	09/2008	7.020%	28	0		
1427	Minidoka/Palisades	09/1978	09/2008	7.020%	75	0		
1428	Minidoka/Palisades	09/1978	09/2008	7.020%	20	0		
1429	Minidoka/Palisades	09/1979	09/2008	7.020%	75	0		
1430	Minidoka/Palisades	09/1979	09/2008	7.020%	19	0		
1431	Minidoka/Palisades	09/1980	09/2008	7.020%	75	0		
1432	Minidoka/Palisades	09/1980	09/2008	7.020%	20	0		
1433	Minidoka/Palisades	09/1981	09/2008	7.020%	75	0		
1434	Minidoka/Palisades	09/1981	09/2008	7.020%	20	0		
1435	Minidoka/Palisades	09/1982	09/2008	7.020%	75	0		
1436	Minidoka/Palisades	09/1982	09/2008	7.020%	19	0		
1437	Minidoka/Palisades	09/1983	09/2008	7.020%	65	0		
1438	Minidoka/Palisades	09/1983	09/2008	7.020%	20	0		
1439	Minidoka/Palisades	09/1984	09/2008	10.075%	44	0		
1440	Minidoka/Palisades	09/1984	09/2008	10.075%	11	0		
1441	Minidoka/Palisades	09/1985	09/2008	7.020%	21	0		
1442	Minidoka/Palisades	09/1986	09/2008	7.020%	21	0		
1443	Minidoka/Palisades	09/1986	09/2008	11.375%	48	0		
1444	Minidoka/Palisades	09/1987	09/2008	7.020%	16	0		
1445	Minidoka/Palisades	09/1988	09/2008	8.500%	31	0		
1446	Minidoka/Palisades	09/1989	09/2008	9.250%	20	0		
1447	Minidoka/Palisades	09/1990	09/2008	8.875%	33	0		
1448	Minidoka/Palisades	09/1991	09/2008	8.750%	62	0		
1449	Minidoka/Palisades	09/1991	09/2008	8.750%	11	0		
1450	Minidoka/Palisades	09/1991	09/2008	8.750%	32	0		
1451	Minidoka/Palisades	09/1992	09/2008	8.500%	6	0		
1452	Minidoka/Palisades	09/1994	09/2029	7.125%	351	0		
1453	Minidoka/Palisades	09/1995	09/2000	7.330%	6	0		
1454	Minidoka/Palisades	09/1995	09/2010	7.890%	40	0		
1455	Minidoka/Palisades	09/1996	09/2011	7.130%	54	0		
1456	Minidoka/Palisades	09/1997	09/2007	6.950%	66	0		
1457	Minidoka/Palisades	09/1997	09/2047	7.150%	50,911	50,911		
1458	Minidoka/Palisades	09/2001	09/2051	5.875%	42	42		
1459	Minidoka/Palisades	09/2012	09/2062	3.375%	7	7		
1460	Minidoka/Palisades	09/2015	09/2065	3.250%	19,237	19,237		
1461	Minidoka/Palisades	09/2016	09/2066	3.000%	206	206		
1462	RRP - Green Springs	09/2001	09/2051	5.875%	11,145	11,145		
1463	RRP - Green Springs	09/2012	09/2062	3.375%	2	2		
1464	RRP - Green Springs	09/2013	09/2063	2.875%	1	1		
1465	The Dalles	09/1957	09/2007	2.500%	15,908	0		
1466	The Dalles	09/1958	09/2008	7.020%	45,837	0		
1467	The Dalles	09/1959	09/2009	7.060%	40,415	0		
1468	The Dalles	09/1960	09/2010	7.090%	39,179	0		
1469	The Dalles	09/1961	09/2011	7.130%	9,492	0		
1470	The Dalles	09/1962	09/2011	7.130%	56	0		
1471	The Dalles	09/1963	09/2011	7.130%	57	0		
1472	The Dalles	09/1964	09/2011	7.130%	57	0		
1473	The Dalles	09/1965	09/2011	7.130%	56	0		
1474	The Dalles	09/1966	09/2011	7.130%	57	0		
1475	The Dalles	09/1967	09/2011	7.130%	57	0		
1476	The Dalles	09/1968	09/2011	7.130%	56	0		

**TABLE 12A:
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1477	The Dalles	09/1969	09/2011	7.130%	57	0		
1478	The Dalles	09/1970	09/2011	7.130%	57	0		
1479	The Dalles	09/1971	09/2011	7.130%	56	0		
1480	The Dalles	09/1972	09/2011	7.130%	57	0		
1481	The Dalles	09/1973	09/2011	7.130%	57	0		
1482	The Dalles	09/1973	09/2023	7.190%	21,983	0		
1483	The Dalles	09/1974	09/2011	7.130%	56	0		
1484	The Dalles	09/1974	09/2024	7.170%	7,268	0		
1485	The Dalles	09/1975	09/2011	7.130%	57	0		
1486	The Dalles	09/1976	09/2011	7.130%	57	0		
1487	The Dalles	09/1977	09/2011	7.130%	56	0		
1488	The Dalles	09/1978	09/2011	7.130%	57	0		
1489	The Dalles	09/1979	09/2011	7.130%	57	0		
1490	The Dalles	09/1980	09/2011	7.130%	56	0		
1491	The Dalles	09/1981	09/2011	7.130%	57	0		
1492	The Dalles	09/1982	09/2011	7.130%	57	0		
1493	The Dalles	09/1983	09/2011	7.130%	56	0		
1494	The Dalles	09/1984	09/2011	10.750%	961	0		
1495	The Dalles	09/1985	09/2011	7.130%	95	0		
1496	The Dalles	09/1985	09/2011	12.375%	280	0		
1497	The Dalles	09/1986	09/2011	7.130%	95	0		
1498	The Dalles	09/1986	09/2011	11.375%	4	0		
1499	The Dalles	09/1987	09/2011	7.130%	1,417	0		
1500	The Dalles	09/1987	09/2011	8.875%	81	0		
1501	The Dalles	09/1988	09/2011	8.500%	685	0		
1502	The Dalles	09/1988	09/2011	8.500%	1	0		
1503	The Dalles	09/1989	09/2011	9.250%	898	0		
1504	The Dalles	09/1990	09/2011	8.875%	319	0		
1505	The Dalles	09/1990	09/2011	8.875%	745	0		
1506	The Dalles	09/1991	09/2011	8.750%	89	0		
1507	The Dalles	09/1991	09/2011	8.750%	2,452	0		
1508	The Dalles	09/1992	09/2011	8.500%	57	0		
1509	The Dalles	09/1992	09/2011	8.500%	130	0		
1510	The Dalles	09/1993	09/2011	7.875%	2,028	0		
1511	The Dalles	09/1993	09/2011	7.875%	2,929	0		
1512	The Dalles	09/1994	09/2029	7.125%	1,425	0		
1513	The Dalles	09/1996	09/2008	7.020%	196	0		
1514	The Dalles	09/1996	09/2011	7.130%	457	0		
1515	The Dalles	09/1996	09/2046	7.150%	1,991	1,991		
1516	The Dalles	09/2000	09/2050	6.125%	2,588	2,588		
1517	The Dalles	09/2002	09/2052	5.500%	1,226	1,226		
1518	The Dalles	09/2004	09/2054	5.375%	182	182		
1519	The Dalles	09/2005	09/2055	5.125%	36,019	36,019		
1520	The Dalles	09/2006	09/2056	4.500%	2,030	2,030		
1521	The Dalles	09/2007	09/2057	5.000%	140	140		
1522	The Dalles	09/2008	09/2058	4.875%	1,651	1,651		
1523	The Dalles	09/2015	09/2065	3.250%	302	302		
1524	The Dalles	09/2016	09/2066	3.000%	4	4		
1525	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	1,068	0		
1526	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	481	0		
1527	Yakima Chandler/Kenniwick	09/1959	09/2022	7.210%	1	0		
1528	Yakima Chandler/Kenniwick	09/1960	09/2022	7.210%	1	0		
1529	Yakima Chandler/Kenniwick	09/1961	09/2022	7.210%	1	0		
1530	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	35	0		
1531	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	10	0		
1532	Yakima Chandler/Kenniwick	09/1985	09/2022	12.375%	357	0		
1533	Yakima Chandler/Kenniwick	09/1986	09/2022	7.210%	439	0		
1534	Yakima Chandler/Kenniwick	09/1986	09/2022	11.375%	7	0		
1535	Yakima Chandler/Kenniwick	09/1987	09/2022	8.875%	126	0		
1536	Yakima Chandler/Kenniwick	09/1989	09/2022	9.250%	18	0		
1537	Yakima Chandler/Kenniwick	09/1990	09/2022	8.875%	40	0		
1538	Yakima Chandler/Kenniwick	09/1991	09/2022	8.750%	109	0		
1539	Yakima Chandler/Kenniwick	09/2005	09/2055	5.125%	833	833		
1540	Yakima Chandler/Kenniwick	09/2009	09/2059	4.375%	15	15		
1541	Yakima Roza	09/1958	09/2008	7.020%	1,194	0		
1542	Yakima Roza	09/1958	09/2008	7.020%	383	0		
1543	Yakima Roza	09/1984	09/2008	10.750%	5	0		
1544	Yakima Roza	09/1984	09/2008	10.750%	17	0		
1545	Yakima Roza	09/1985	09/2008	7.020%	69	0		
1546	Yakima Roza	09/1985	09/2008	12.375%	5	0		
1547	Yakima Roza	09/1986	09/2008	7.020%	6	0		
1548	Yakima Roza	09/1987	09/2008	7.020%	2	0		
1549	Yakima Roza	09/1987	09/2008	8.875%	9	0		
1550	Yakima Roza	09/2001	09/2051	5.875%	15	14		
1551	Bureau Direct	05/1995	05/2015	7.500%	35,000	0		
1552	Bureau Direct	05/1997	05/2000	6.500%	50,000	0		
1553	Bureau Direct	04/1998	05/2008	6.000%	25,000	0		
1554	Bureau Direct	09/1999	09/2004	6.400%	20,000	0		
1555	Bureau Direct	04/2000	04/2003	6.850%	40,000	0		
1556	Bureau Direct	09/2000	09/2005	6.700%	20,000	0		
1557	Bureau Direct	06/2001	06/2004	4.750%	50,000	0		
1558	Bureau Direct	03/2002	03/2005	4.600%	30,000	0		

**TABLE 12A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1559	Bureau Direct	09/2002	09/2006	3.050%	20,000	0		
1560	Bureau Direct	12/2002	12/2006	3.050%	40,000	0		
1561	Bureau Direct	04/2003	04/2006	2.400%	40,000	0		
1562	Bureau Direct	04/2003	04/2006	2.400%	25,000	0		
1563	Bureau Direct	07/2003	07/2006	2.300%	30,000	0		
1564	Bureau Direct	09/2003	09/2006	2.500%	25,000	0		
1565	Bureau Direct	01/2004	01/2007	2.500%	25,000	0		
1566	Bureau Direct	04/2004	04/2007	2.950%	35,000	0		
1567	Bureau Direct	07/2004	07/2007	3.450%	25,000	0		
1568	Bureau Direct	09/2004	09/2007	3.100%	30,000	0		
1569	Bureau Direct	11/2004	11/2007	3.500%	20,000	0		
1570	Bureau Direct	01/2005	01/2008	3.600%	20,000	0		
1571	Bureau Direct	06/2005	06/2008	3.950%	30,000	0		
1572	Bureau Direct	09/2005	09/2008	4.250%	25,000	0		
1573	Bureau Direct	03/2006	03/2009	5.050%	25,000	0		
1574	Bureau Direct	07/2006	07/2009	5.350%	45,000	0		
1575	Bureau Direct	09/2006	09/2009	4.950%	15,000	0		
1576	Bureau Direct	01/2007	01/2010	5.100%	35,000	0		
1577	Bureau Direct	03/2007	03/2010	4.800%	30,000	0		
1578	Bureau Direct	06/2007	06/2010	5.350%	30,000	0		
1579	Bureau Direct	01/2008	01/2011	2.850%	35,000	0		
1580	Bureau Direct	01/2008	01/2011	2.850%	20,000	0		
1581	Bureau Direct	05/2008	05/2011	3.358%	35,000	0		
1582	Bureau Direct	05/2008	05/2011	3.358%	25,000	0		
1583	Bureau Direct	06/2008	06/2012	3.974%	30,000	0		
1584	Bureau Direct	07/2008	07/2012	3.913%	35,000	0		
1585	Bureau Direct	09/2008	09/2012	3.444%	35,000	0		
1586	Bureau Direct	01/2009	01/2021	3.999%	25,000	25,000		
1587	Bureau Direct	04/2009	04/2023	4.391%	25,000	25,000	04/2028	3.64%
1588	Bureau Direct	06/2009	06/2039	5.192%	25,000	25,000		
1589	Bureau Direct	09/2009	09/2019	3.699%	25,000	25,000	09/2029	3.71%
1590	Bureau Direct	10/2009	10/2018	3.719%	24,000	24,000		
1591	Bureau Direct	10/2009	10/2019	3.842%	20,000	20,000		
1592	Bureau Direct	11/2009	11/2019	3.637%	7,000	7,000		
1593	Bureau Direct	12/2009	12/2019	4.194%	13,000	13,000		
1594	Bureau Direct	01/2010	01/2019	3.714%	10,000	10,000	01/2029	3.71%
1595	Bureau Direct	02/2010	02/2019	0.165%	10,000	0		
1596	Bureau Direct	03/2010	03/2020	4.083%	30,000	30,000		
1597	Bureau Direct	04/2010	04/2020	3.973%	18,000	18,000		
1598	Bureau Direct	05/2010	05/2020	3.574%	15,000	15,000		
1599	Bureau Direct	06/2010	06/2020	3.243%	10,000	10,000	06/2030	4.06%
1600	Bureau Direct	06/2010	06/2020	3.243%	30,000	30,000	06/2030	4.06%
1601	Bureau Direct	07/2010	07/2020	3.118%	17,000	17,000		
1602	Bureau Direct	08/2010	08/2020	0.165%	5,000	0		
1603	Bureau Direct	09/2010	09/2021	2.883%	22,000	22,000		
1604	Bureau Direct	10/2010	10/2034	4.211%	20,000	20,000		
1605	Bureau Direct	01/2011	09/2011	0.244%	20,000	0		
1606	Bureau Direct	01/2011	09/2011	0.244%	35,000	0		
1607	Bureau Direct	01/2011	01/2039	5.040%	35,000	35,000		
1608	Bureau Direct	02/2011	02/2040	4.995%	50,000	50,000		
1609	Bureau Direct	05/2011	09/2011	0.076%	35,000	0		
1610	Bureau Direct	05/2011	09/2011	0.076%	25,000	0		
1611	Bureau Direct	06/2011	06/2036	4.629%	30,000	30,000		
1612	Bureau Direct	06/2011	06/2038	4.700%	30,000	30,000		
1613	Bureau Direct	08/2011	08/2037	4.208%	30,000	30,000		
1614	Bureau Direct	09/2011	07/2041	3.825%	30,000	0		
1615	Bureau Direct	12/2011	12/2038	3.880%	35,000	0		
1616	Bureau Direct	01/2012	01/2038	3.893%	15,000	0		
1617	Bureau Direct	02/2012	02/2034	0.697%	55,000	55,000		
1618	Bureau Direct	06/2012	06/2041	3.666%	50,000	0		
1619	Bureau Direct	06/2012	09/2012	0.119%	30,000	0		
1620	Bureau Direct	08/2012	07/2042	3.834%	44,000	0		
1621	Bureau Direct	09/2012	09/2013	0.174%	35,000	0		
1622	Bureau Direct	09/2012	09/2042	3.668%	25,000	0		
1623	Bureau Direct	01/2013	01/2043	6.194%	70,000	0		
1624	Bureau Direct	02/2013	02/2043	5.993%	18,000	0		
1625	Bureau Direct	03/2013	03/2043	5.958%	15,000	0		
1626	Bureau Direct	04/2013	04/2043	5.633%	15,000	0		
1627	Bureau Direct	05/2013	05/2043	6.192%	18,000	0		
1628	Bureau Direct	06/2013	01/2039	0.674%	35,000	35,000		
1629	Bureau Direct	06/2013	06/2043	6.938%	21,000	0		
1630	Bureau Direct	07/2013	07/2034	7.164%	25,000	0		
1631	Bureau Direct	08/2013	08/2034	7.413%	15,000	0		
1632	Bureau Direct	11/2013	09/2014	0.140%	77,000	0		
1633	Bureau Direct	11/2013	09/2021	2.812%	50,000	50,000		
1634	Bureau Direct	11/2013	09/2022	3.125%	19,000	19,000		
1635	Bureau Direct	11/2013	09/2020	2.473%	51,000	51,000	09/2030	4.06%
1636	Bureau Direct	01/2014	12/2018	1.943%	43,000	43,000		
1637	Bureau Direct	01/2014	12/2018	1.943%	38,000	38,000		
1638	Bureau Direct	01/2014	12/2018	1.943%	21,000	21,000	12/2028	3.71%
1639	Bureau Direct	01/2014	12/2018	1.943%	26,000	26,000	12/2028	3.71%
1640	Bureau Direct	01/2014	12/2018	1.943%	14,000	14,000	12/2028	3.71%

**TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1641	Bureau Direct	09/2014	05/2032	0.713%	16,000	16,000		
1642	Bureau Direct	09/2014	05/2032	0.713%	10,000	10,000		
1643	Bureau Direct	09/2014	06/2033	0.732%	11,000	11,000		
1644	Bureau Direct	09/2014	06/2033	0.732%	12,000	12,000		
1645	Bureau Direct	09/2014	07/2033	0.674%	15,000	15,000		
1646	Bureau Direct	09/2015	09/2033	3.134%	10,000	10,000		
1647	Bureau Direct	04/2016	04/2031	2.661%	17,000	17,000		
1648	Bureau Direct	07/2016	07/2030	2.145%	12,000	12,000		
1649	Bureau Direct	07/2016	07/2030	2.145%	25,000	25,000		
1650	Conservation	09/1983	09/2003	12.200%	140,000	0		
1651	Conservation	09/1984	09/2004	13.050%	150,000	0		
1652	Conservation	09/1985	09/1990	10.150%	50,000	0		
1653	Conservation	03/1986	03/1991	7.800%	50,000	0		
1654	Conservation	03/1986	03/1996	8.150%	50,000	0		
1655	Conservation	04/1987	04/2007	9.300%	75,000	0		
1656	Conservation	06/1987	06/1992	8.350%	50,000	0		
1657	Conservation	04/1988	04/2008	9.900%	90,000	0		
1658	Conservation	07/1989	07/2009	8.550%	40,000	0		
1659	Conservation	09/1989	09/1995	8.600%	66,000	0		
1660	Conservation	09/1989	09/2002	8.650%	66,000	0		
1661	Conservation	07/1992	07/1997	5.800%	80,200	0		
1662	Conservation	07/1992	07/2007	7.140%	100,000	0		
1663	Conservation	10/1992	10/2012	8.050%	50,000	0		
1664	Conservation	02/1993	02/2013	7.400%	50,000	0		
1665	Conservation	08/1993	08/2013	6.750%	40,000	0		
1666	Conservation	01/1994	01/2014	6.750%	50,000	0		
1667	Conservation	05/1994	05/1998	7.100%	50,000	0		
1668	Conservation	05/1995	05/2015	7.500%	85,000	0		
1669	Conservation	01/1996	01/2011	6.700%	30,000	0		
1670	Conservation	11/1996	11/2016	7.200%	40,000	0		
1671	Conservation	05/1998	05/2009	6.000%	37,700	0		
1672	Conservation	09/1998	09/2008	5.300%	104,300	0		
1673	Conservation	09/1998	09/2013	5.600%	52,800	0		
1674	Conservation	07/2000	07/2003	6.950%	32,000	0		
1675	Conservation	06/2002	06/2005	3.750%	40,000	0		
1676	Conservation	01/2004	01/2008	2.950%	30,000	0		
1677	Conservation	03/2006	03/2009	5.050%	20,000	0		
1678	Conservation	06/2007	06/2010	5.350%	20,000	0		
1679	Conservation	09/2008	09/2013	3.701%	10,000	0		
1680	Conservation	09/2009	09/2014	2.746%	15,000	0		
1681	Conservation	01/2010	01/2015	2.609%	15,000	0		
1682	Conservation	04/2010	04/2015	2.677%	20,000	0		
1683	Conservation	08/2010	08/2015	1.619%	15,000	0		
1684	Conservation	09/2010	09/2015	1.534%	10,000	0		
1685	Conservation	01/2011	01/2023	4.046%	40,000	40,000		
1686	Conservation	04/2011	04/2023	3.932%	35,000	35,000		
1687	Conservation	08/2011	08/2023	3.206%	40,000	40,000		
1688	Conservation	10/2011	08/2012	0.204%	55,000	0		
1689	Conservation	12/2011	12/2037	0.189%	55,000	0		
1690	Conservation	05/2012	09/2015	0.676%	30,000	0		
1691	Conservation	06/2012	09/2015	0.671%	15,000	0		
1692	Conservation	08/2012	08/2024	2.788%	15,000	0		
1693	Conservation	11/2012	11/2016	0.630%	20,000	0		
1694	Conservation	01/2013	01/2018	1.107%	9,000	9,000		
1695	Conservation	03/2013	03/2025	4.992%	10,000	0		
1696	Conservation	04/2013	04/2025	4.553%	12,000	0		
1697	Conservation	08/2013	08/2025	6.973%	5,000	0		
1698	Conservation	10/2013	10/2025	3.568%	34,000	34,000		
1699	Conservation	11/2013	09/2023	3.375%	27,000	27,000		
1700	Conservation	12/2013	12/2021	3.142%	6,000	6,000		
1701	Conservation	12/2013	12/2023	0.732%	55,000	55,000		
1702	Conservation	01/2014	01/2026	3.621%	5,000	5,000		
1703	Conservation	04/2014	06/2025	0.732%	30,000	30,000		
1704	Conservation	05/2014	04/2024	0.526%	15,000	15,000		
1705	Conservation	05/2014	04/2025	0.526%	3,000	3,000		
1706	Conservation	06/2014	10/2024	0.526%	5,000	5,000		
1707	Conservation	07/2014	07/2025	0.674%	12,000	12,000		
1708	Conservation	08/2014	09/2025	0.947%	4,000	4,000		
1709	Conservation	10/2014	12/2024	0.732%	10,000	10,000		
1710	Conservation	11/2014	03/2027	0.947%	6,000	6,000		
1711	Conservation	12/2014	12/2023	2.403%	7,000	7,000		
1712	Conservation	01/2015	09/2015	0.204%	15,000	0		
1713	Conservation	01/2015	01/2024	1.908%	7,000	7,000		
1714	Conservation	02/2015	02/2024	2.251%	8,000	8,000		
1715	Conservation	03/2015	03/2025	2.295%	5,000	5,000		
1716	Conservation	04/2015	04/2024	2.269%	5,000	5,000		
1717	Conservation	05/2015	05/2021	1.898%	5,000	5,000		
1718	Conservation	07/2015	07/2021	2.067%	14,000	14,000		
1719	Conservation	08/2015	08/2022	2.233%	6,000	6,000		
1720	Conservation	09/2015	09/2022	2.062%	4,000	4,000		
1721	Conservation	10/2015	10/2027	0.732%	25,000	25,000		
1722	Conservation	11/2016	04/2017	0.684%	20,000	0		

**TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1723	Conservation	04/2017	01/2018	1.051%	20,000	20,000		
1724	Construction (AS)	10/1992	10/2032	8.350%	38	0		
1725	Construction (AS)	07/1995	07/2025	7.700%	67	0		
1726	Construction (AS)	01/1996	01/2003	5.900%	5,622	0		
1727	Construction (AS)	01/1997	01/2004	6.800%	7,400	0		
1728	Construction (AS)	08/1998	08/2008	5.750%	3,181	0		
1729	Construction (AS)	02/1999	02/2014	5.900%	950	0		
1730	Construction (AS)	07/2000	07/2004	7.000%	10,948	0		
1731	Construction (AS)	01/2001	01/2010	6.050%	68	0		
1732	Construction (AS)	03/2002	03/2005	4.600%	1,990	0		
1733	Construction (AS)	10/2002	10/2005	3.000%	45,062	0		
1734	Construction (AS)	01/2004	01/2007	2.500%	13,357	0		
1735	Construction (AS)	11/2004	11/2008	3.750%	7,990	0		
1736	Construction (AS)	09/2006	09/2010	4.950%	9,681	0		
1737	Construction (AS)	01/2008	01/2012	3.200%	10,000	0		
1738	Construction (AS)	09/2008	09/2012	3.444%	10,000	0		
1739	Construction (AS)	09/2009	09/2014	2.746%	14,000	0		
1740	Construction (AS)	02/2010	02/2015	0.165%	7,500	0		
1741	Construction (AS)	08/2010	08/2015	1.619%	5,000	0		
1742	Construction (AS)	06/2011	06/2016	1.957%	7,000	0		
1743	Construction (AS)	08/2011	08/2016	1.423%	3,500	0		
1744	Construction (AS)	01/2012	09/2012	0.146%	10,000	0		
1745	Construction (AS)	06/2012	09/2015	0.671%	7,700	0		
1746	Construction (AS)	11/2012	11/2018	1.109%	5,250	5,250		
1747	Construction (AS)	04/2013	04/2017	0.622%	2,450	0		
1748	Construction (AS)	06/2013	06/2017	1.271%	3,000	3,000	06/2018	0.75%
1749	Construction (AS)	08/2013	08/2017	1.494%	2,000	2,000	08/2018	0.75%
1750	Construction (AS)	10/2013	10/2019	2.039%	4,200	4,200		
1751	Construction (AS)	10/2013	10/2019	2.039%	5,000	5,000		
1752	Construction (AS)	01/2014	01/2020	2.183%	1,750	1,750		
1753	Construction (AS)	01/2014	01/2020	2.183%	2,000	2,000		
1754	Construction (AS)	02/2014	09/2014	0.117%	950	0		
1755	Construction (AS)	04/2014	03/2020	0.947%	1,400	1,400		
1756	Construction (AS)	04/2014	03/2020	0.947%	2,000	2,000		
1757	Construction (AS)	05/2014	04/2020	0.526%	700	700		
1758	Construction (AS)	07/2014	07/2020	0.674%	1,050	1,050		
1759	Construction (AS)	11/2014	11/2020	1.809%	2,100	2,100		
1760	Construction (AS)	12/2014	12/2020	1.922%	1,050	1,050		
1761	Construction (AS)	02/2015	02/2021	1.761%	1,750	1,750		
1762	Construction (AS)	05/2015	05/2021	1.898%	2,100	2,100		
1763	Construction (AS)	09/2015	09/2017	0.744%	7,700	7,700	09/2018	0.75%
1764	Construction (AS)	10/2015	10/2021	1.942%	2,800	2,800		
1765	Construction (AS)	02/2016	02/2022	0.697%	3,000	3,000		
1766	Construction (AS)	06/2016	09/2016	0.436%	7,000	0		
1767	Construction (AS)	04/2017	01/2018	1.051%	2,450	2,450		
1768	Corps	09/2015	09/2033	3.134%	4,000	4,000		
1769	Corps	02/2016	02/2045	0.697%	3,000	3,000		
1770	Corps	04/2016	04/2031	2.661%	53,000	53,000		
1771	Corps	05/2016	05/2030	2.599%	15,000	15,000		
1772	Fish and Wildlife	05/1989	05/1999	8.950%	25,000	0		
1773	Fish and Wildlife	05/1991	05/1996	7.950%	50,000	0		
1774	Fish and Wildlife	02/1993	02/2008	6.950%	20,000	0		
1775	Fish and Wildlife	09/1994	09/1999	7.650%	20,000	0		
1776	Fish and Wildlife	08/1995	08/2010	7.200%	35,000	0		
1777	Fish and Wildlife	01/1998	01/2013	6.100%	60,000	0		
1778	Fish and Wildlife	09/1999	09/2003	6.300%	20,000	0		
1779	Fish and Wildlife	01/2001	01/2005	5.650%	25,000	0		
1780	Fish and Wildlife	09/2003	09/2007	3.100%	20,000	0		
1781	Fish and Wildlife	09/2005	09/2008	4.250%	20,000	0		
1782	Fish and Wildlife	09/2006	09/2010	4.950%	20,000	0		
1783	Fish and Wildlife	06/2007	06/2010	5.350%	30,000	0		
1784	Fish and Wildlife	09/2007	09/2011	4.700%	20,000	0		
1785	Fish and Wildlife	09/2008	09/2012	3.444%	20,000	0		
1786	Fish and Wildlife	06/2009	06/2024	4.556%	20,000	20,000		
1787	Fish and Wildlife	12/2009	12/2018	4.069%	26,000	26,000		
1788	Fish and Wildlife	08/2010	08/2019	2.646%	20,000	20,000		
1789	Fish and Wildlife	01/2011	01/2026	4.440%	50,000	50,000		
1790	Fish and Wildlife	02/2011	02/2026	4.398%	15,000	15,000		
1791	Fish and Wildlife	06/2011	06/2026	4.205%	15,000	15,000		
1792	Fish and Wildlife	01/2012	01/2038	3.893%	30,000	0		
1793	Fish and Wildlife	05/2012	05/2029	0.140%	5,000	0		
1794	Fish and Wildlife	06/2012	06/2041	3.666%	11,000	0		
1795	Fish and Wildlife	08/2012	08/2027	3.090%	11,000	0		
1796	Fish and Wildlife	11/2012	11/2027	5.046%	25,000	0		
1797	Fish and Wildlife	01/2013	09/2013	0.149%	60,000	0		
1798	Fish and Wildlife	03/2013	03/2028	5.445%	10,000	0		
1799	Fish and Wildlife	04/2013	04/2028	5.042%	6,000	0		
1800	Fish and Wildlife	06/2013	06/2028	6.607%	8,000	0		
1801	Fish and Wildlife	08/2013	08/2028	7.249%	5,000	0		
1802	Fish and Wildlife	10/2013	12/2026	3.717%	28,000	28,000		
1803	Fish and Wildlife	10/2013	05/2027	3.762%	11,000	11,000		
1804	Fish and Wildlife	10/2013	10/2028	3.880%	22,000	22,000		

TABLE 12A:
HISTORICAL INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1805	Fish and Wildlife	11/2013	09/2022	3.125%	31,000	31,000		
1806	Fish and Wildlife	11/2013	09/2023	3.375%	23,000	23,000	09/2028	3.64%
1807	Fish and Wildlife	11/2013	05/2027	0.713%	5,000	5,000		
1808	Fish and Wildlife	01/2014	01/2029	3.896%	7,000	7,000		

**TABLE 12B:
PROJECTED INVESTMENTS
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G
	Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate
1	Bureau Direct	07/2017	07/2032	2.180%	13,000		
2	Bureau Direct	08/2017	08/2032	2.180%	13,000		
3	Bureau Direct	09/2017	09/2032	2.180%	14,000		
4	Bureau Direct	07/2018	07/2033	3.250%	28,000		
5	Bureau Direct	08/2018	08/2034	3.290%	28,000		
6	Bureau Direct	09/2018	09/2035	3.330%	29,000		
7	Bureau Direct	07/2019	07/2036	3.960%	47,000		
8	Bureau Direct	08/2019	08/2037	3.990%	48,000		
9	Bureau Direct	09/2019	09/2038	4.030%	48,000		
11	Columbia River Fish Mitigation	09/2017	09/2067	2.380%	63,629		
12	Columbia River Fish Mitigation	09/2018	09/2068	3.320%	147,186		
13	Columbia River Fish Mitigation	09/2019	09/2069	3.870%	63,746		
14	Construction (AS)	09/2017	09/2023	1.510%	3,150		
15	Construction (AS)	09/2018	09/2024	2.560%	5,600		
16	Construction (AS)	09/2019	09/2025	3.270%	5,950		
17	Corps	07/2017	07/2032	2.180%	26,796		
18	Corps	08/2017	08/2032	2.180%	26,796		
19	Corps	09/2017	09/2032	2.180%	27,796		
20	Corps	07/2018	07/2033	3.250%	53,000		
21	Corps	08/2018	08/2034	3.290%	53,000		
22	Corps	09/2018	09/2035	3.330%	53,000		
23	Corps	07/2019	07/2036	3.960%	40,000		
24	Corps	08/2019	08/2037	3.990%	41,000		
25	Corps	09/2019	09/2038	4.030%	41,000		
26	Fish and Wildlife	09/2017	09/2032	2.180%	40,000		
27	Fish and Wildlife	09/2018	09/2033	3.250%	51,000		
28	Fish and Wildlife	09/2019	09/2034	3.890%	44,000		
29	Technology (G)	09/2017	09/2022	1.400%	8,000		
30	Technology (G)	09/2018	09/2023	2.440%	5,000		
31	Technology (G)	09/2019	03/2024	3.160%	5,000		
32	Totals:				1,072,650		

**TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)**

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1	2017	Albeni Falls	Historical	3,090	6.744%	208	-	208
2	2017	Boise	Historical	4,425	6.657%	295	-	295
3	2017	Bonneville 2nd Powerhouse	Historical	38,293	7.150%	2,738	-	2,738
4	2017	Bonneville Dam	Historical	135,618	5.283%	7,164	-	7,164
5	2017	Chief Joseph	Historical	37,578	5.043%	1,895	-	1,895
6	2017	Columbia Basin	Historical	97,915	5.669%	5,551	-	5,551
7	2017	Columbia Basin 3rd Powerhouse	Historical	12,631	7.150%	903	-	903
8	2017	Columbia River Fish Mitigation	Historical	1,422,823	4.370%	62,178	-	62,178
9	2017	Cougar	Historical	16,710	4.580%	765	-	765
10	2017	Detroit Lake/Big Cliff	Historical	2,168	4.673%	101	-	101
11	2017	Dworshak	Historical	13,495	6.331%	854	-	854
12	2017	Green Peter/Foster	Historical	863	4.287%	37	-	37
13	2017	Hills Creek	Historical	2,867	5.972%	171	-	171
14	2017	Hungry Horse Dam	Historical	11,549	6.139%	709	-	709
15	2017	Ice Harbor	Historical	19,152	4.811%	921	-	921
16	2017	John Day	Historical	30,473	5.425%	1,653	-	1,653
17	2017	Libby	Historical	22,777	6.652%	1,515	-	1,515
18	2017	Little Goose	Historical	14,231	6.058%	862	-	862
19	2017	Lookout Dam	Historical	13,543	5.467%	740	-	740
20	2017	Lost Creek	Historical	272	6.370%	17	-	17
21	2017	Lower Granite	Historical	18,878	4.558%	860	-	860
22	2017	Lower Monument	Historical	13,764	5.380%	741	-	741
23	2017	Lower Snake Fish and Wildlife	Historical	233,996	7.082%	16,572	-	16,572
24	2017	McNary	Historical	15,096	4.927%	744	-	744
25	2017	Mimidoka/Palisades	Historical	70,403	6.071%	4,274	-	4,274
26	2017	RRP - Green Springs	Historical	11,148	5.874%	655	-	655
27	2017	The Dalles	Historical	46,132	5.230%	2,413	-	2,413
28	2017	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	43
29	2017	Yakima Roza	Historical	14	5.878%	1	-	1
30	2017	Bureau Direct	Historical	991,000	3.017%	29,897	-	29,897
31	2017	Bureau Direct	New	26,000	-	-	71	71
32	2017	Conservation	Historical	422,000	2.216%	9,352	-	9,352
33	2017	Conservation	New	20,000	0.263%	53	35	87
34	2017	Construction (AS)	Historical	48,850	1.440%	704	(9)	695
35	2017	Construction (AS)	New	2,450	0.263%	6	4	11
36	2017	Corps	Historical	75,000	2.595%	1,946	-	1,946
37	2017	Corps	New	53,592	-	-	146	146
38	2017	Fish and Wildlife	Historical	340,000	3.223%	10,958	-	10,958
39	2017	Technology (G)	Historical	41,000	1.353%	555	-	555
40	2017	Float	Historical	-	-	(632)	-	(632)
41	FY 2017	Subtotal:		4,330,645		168,420	247	168,667
42	2018	Albeni Falls	Historical	580	4.988%	29	-	29
43	2018	Boise	Historical	1,060	5.091%	54	-	54
44	2018	Bonneville Dam	Historical	131,701	5.227%	6,884	-	6,884
45	2018	Chief Joseph	Historical	29,608	4.475%	1,325	-	1,325
46	2018	Columbia Basin	Historical	90,988	5.556%	5,055	-	5,055
47	2018	Columbia River Fish Mitigation	Historical	1,430,683	4.183%	59,849	-	59,849
48	2018	Cougar	Historical	16,684	4.576%	763	-	763
49	2018	Detroit Lake/Big Cliff	Historical	2,130	4.629%	99	-	99
50	2018	Dworshak	Historical	4,692	4.795%	225	-	225
51	2018	Green Peter/Foster	Historical	837	4.198%	35	-	35
52	2018	Hills Creek	Historical	209	3.888%	8	-	8
53	2018	Hungry Horse Dam	Historical	5,231	4.918%	257	-	257
54	2018	Ice Harbor	Historical	18,167	4.715%	857	-	857
55	2018	John Day	Historical	19,039	4.537%	864	-	864
56	2018	Libby	Historical	7,336	5.603%	411	-	411
57	2018	Little Goose	Historical	8,129	5.239%	426	-	426
58	2018	Lookout Dam	Historical	8,373	5.052%	423	-	423
59	2018	Lost Creek	Historical	154	5.774%	9	-	9
60	2018	Lower Granite	Historical	17,567	4.364%	767	-	767
61	2018	Lower Monument	Historical	11,604	5.051%	586	-	586
62	2018	Lower Snake Fish and Wildlife	Historical	5,152	4.370%	225	-	225
63	2018	McNary	Historical	14,461	4.829%	698	-	698
64	2018	Mimidoka/Palisades	Historical	19,492	3.253%	634	-	634
65	2018	RRP - Green Springs	Historical	11,148	5.874%	655	-	655
66	2018	The Dalles	Historical	41,553	5.082%	2,112	-	2,112
67	2018	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	43
68	2018	Yakima Roza	Historical	14	5.878%	1	-	1
69	2018	Bureau Direct	Historical	1,031,000	2.984%	30,768	-	30,768
70	2018	Bureau Direct	New	56,000	-	-	228	228
71	2018	Conservation	Historical	442,000	2.128%	9,407	(51)	9,356
72	2018	Construction (AS)	Historical	54,450	1.245%	678	(7)	670
73	2018	Corps	Historical	156,389	2.378%	3,719	-	3,719
74	2018	Corps	New	106,000	-	-	432	432
75	2018	Fish and Wildlife	Historical	380,000	3.113%	11,830	-	11,830
76	2018	Technology (G)	Historical	49,000	1.360%	667	-	667
77	2018	Float	Historical	-	-	(611)	-	(611)
78	FY 2018	Subtotal:		4,172,280		139,752	601	140,353
79	2019	Albeni Falls	Historical	580	4.988%	29	-	29
80	2019	Boise	Historical	1,060	5.091%	54	-	54
81	2019	Bonneville Dam	Historical	107,256	5.022%	5,387	-	5,387

**TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)**

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
82	2019	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
83	2019	Columbia Basin	Historical	90,988	5.556%	5,055	-	-	5,055
84	2019	Columbia River Fish Mitigation	Historical	1,541,604	4.056%	62,523	-	-	62,523
85	2019	Cougar	Historical	16,684	4.576%	763	-	-	763
86	2019	Detroit Lake/Big Cliff	Historical	2,130	4.629%	99	-	-	99
87	2019	Dworshak	Historical	4,692	4.795%	225	-	-	225
88	2019	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
89	2019	Hills Creek	Historical	202	3.813%	8	-	-	8
90	2019	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
91	2019	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
92	2019	John Day	Historical	18,421	4.492%	827	-	-	827
93	2019	Libby	Historical	1,774	4.751%	84	-	-	84
94	2019	Little Goose	Historical	3,521	4.406%	155	-	-	155
95	2019	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
96	2019	Lost Creek	Historical	7	3.748%	-	-	-	-
97	2019	Lower Granite	Historical	15,542	4.168%	648	-	-	648
98	2019	Lower Monument	Historical	8,303	4.723%	392	-	-	392
99	2019	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
100	2019	McNary	Historical	13,414	4.747%	637	-	-	637
101	2019	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
102	2019	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
103	2019	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
104	2019	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
105	2019	Bureau Direct	Historical	1,116,000	3.001%	33,493	-	(1,121)	32,372
106	2019	Bureau Direct	New	95,000	-	-	-	-	469
107	2019	Conservation	Historical	413,000	2.240%	9,252	-	-	9,252
108	2019	Construction (AS)	Historical	44,900	1.640%	736	-	(20)	717
109	2019	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
110	2019	Corps	New	81,000	-	-	-	400	400
111	2019	Fish and Wildlife	Historical	431,000	3.007%	12,958	-	(309)	12,649
112	2019	Technology (G)	Historical	54,000	1.460%	789	-	-	789
113	2019	Float	Historical	-	-	(1,144)	-	-	(1,144)
114	FY 2019	Subtotal:		4,503,846		147,718	-	(582)	147,136
115	2020	Albeni Falls	Historical	580	4.988%	29	-	-	29
116	2020	Boise	Historical	1,060	5.091%	54	-	-	54
117	2020	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
118	2020	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
119	2020	Columbia Basin	Historical	76,752	5.497%	4,219	-	-	4,219
120	2020	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
121	2020	Cougar	Historical	16,684	4.576%	763	-	-	763
122	2020	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
123	2020	Dworshak	Historical	4,692	4.795%	225	-	-	225
124	2020	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
125	2020	Hills Creek	Historical	202	3.813%	8	-	-	8
126	2020	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
127	2020	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
128	2020	John Day	Historical	18,421	4.492%	827	-	-	827
129	2020	Libby	Historical	1,774	4.751%	84	-	-	84
130	2020	Little Goose	Historical	3,521	4.406%	155	-	-	155
131	2020	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
132	2020	Lost Creek	Historical	7	3.748%	-	-	-	-
133	2020	Lower Granite	Historical	15,542	4.168%	648	-	-	648
134	2020	Lower Monument	Historical	8,303	4.723%	392	-	-	392
135	2020	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
136	2020	McNary	Historical	13,414	4.747%	637	-	-	637
137	2020	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
138	2020	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
139	2020	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
140	2020	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
141	2020	Bureau Direct	Historical	1,154,000	3.161%	36,480	-	(1,023)	35,458
142	2020	Conservation	Historical	413,000	2.240%	9,252	-	-	9,252
143	2020	Construction (AS)	Historical	45,600	1.647%	751	-	(94)	657
144	2020	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
145	2020	Fish and Wildlife	Historical	429,000	3.173%	13,613	-	-	13,613
146	2020	Replacements	New	218,435	2.215%	4,838	-	-	4,838
147	2020	Technology (G)	Historical	59,000	1.604%	947	-	-	947
148	2020	Float	Historical	-	-	(975)	-	-	(975)
149	FY 2020	Subtotal:		4,756,356		162,853	-	(1,117)	161,736

**TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)**

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
150	2021	Albeni Falls	Historical	580	4.988%	29	-	-	29
151	2021	Boise	Historical	1,060	5.091%	54	-	-	54
152	2021	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
153	2021	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
154	2021	Columbia Basin	Historical	70,209	5.462%	3,835	-	-	3,835
155	2021	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
156	2021	Cougar	Historical	16,684	4.576%	763	-	-	763
157	2021	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
158	2021	Dworshak	Historical	4,692	4.795%	225	-	-	225
159	2021	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
160	2021	Hills Creek	Historical	202	3.813%	8	-	-	8
161	2021	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
162	2021	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
163	2021	John Day	Historical	18,421	4.492%	827	-	-	827
164	2021	Libby	Historical	1,774	4.751%	84	-	-	84
165	2021	Little Goose	Historical	3,521	4.406%	155	-	-	155
166	2021	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
167	2021	Lost Creek	Historical	7	3.748%	-	-	-	-
168	2021	Lower Granite	Historical	15,542	4.168%	648	-	-	648
169	2021	Lower Monument	Historical	8,303	4.723%	392	-	-	392
170	2021	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
171	2021	McNary	Historical	13,414	4.747%	637	-	-	637
172	2021	Minidoka/Palispades	Historical	19,450	3.247%	632	-	-	632
173	2021	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
174	2021	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
175	2021	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
176	2021	Bureau Direct	Historical	1,034,000	3.282%	33,936	-	(165)	33,771
177	2021	Conservation	Historical	413,000	2.240%	9,252	-	(80)	9,172
178	2021	Construction (AS)	Historical	27,500	1.982%	545	-	(34)	511
179	2021	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
180	2021	Fish and Wildlife	Historical	429,000	3.173%	13,613	-	-	13,613
181	2021	Replacements	Historical	218,435	4.430%	9,677	-	-	9,677
182	2021	Replacements	New	218,435	2.215%	4,838	-	-	4,838
183	2021	Technology (G)	Historical	59,000	1.169%	690	-	(85)	605
184	2021	Float	Historical	-	-	(1,006)	-	-	(1,006)
185	FY 2021	Subtotal:		4,830,148		169,108		(363)	168,745
186	2022	Albeni Falls	Historical	580	4.988%	29	-	-	29
187	2022	Boise	Historical	1,060	5.091%	54	-	-	54
188	2022	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
189	2022	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
190	2022	Columbia Basin	Historical	68,609	5.449%	3,709	-	-	3,709
191	2022	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
192	2022	Cougar	Historical	16,684	4.576%	763	-	-	763
193	2022	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
194	2022	Dworshak	Historical	4,692	4.795%	225	-	-	225
195	2022	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
196	2022	Hills Creek	Historical	202	3.813%	8	-	-	8
197	2022	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
198	2022	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
199	2022	John Day	Historical	18,421	4.492%	827	-	-	827
200	2022	Libby	Historical	1,774	4.751%	84	-	-	84
201	2022	Little Goose	Historical	3,521	4.406%	155	-	-	155
202	2022	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
203	2022	Lost Creek	Historical	7	3.748%	-	-	-	-
204	2022	Lower Granite	Historical	15,542	4.168%	648	-	-	648
205	2022	Lower Monument	Historical	8,303	4.723%	392	-	-	392
206	2022	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
207	2022	McNary	Historical	13,414	4.747%	637	-	-	637
208	2022	Minidoka/Palispades	Historical	19,450	3.247%	632	-	-	632
209	2022	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
210	2022	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
211	2022	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
212	2022	Bureau Direct	Historical	937,000	3.351%	31,396	-	-	31,396
213	2022	Conservation	Historical	394,000	2.227%	8,774	-	(58)	8,715
214	2022	Construction (AS)	Historical	20,500	2.064%	423	-	(24)	399
215	2022	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
216	2022	Fish and Wildlife	Historical	429,000	3.173%	13,613	-	-	13,613
217	2022	Replacements	Historical	436,871	4.430%	19,353	-	-	19,353
218	2022	Replacements	New	218,435	2.215%	4,838	-	-	4,838
219	2022	Technology (G)	Historical	24,000	1.802%	432	-	(7)	426
220	2022	Float	Historical	-	-	(898)	-	-	(898)
221	FY 2022	Subtotal:		4,888,444		175,369		(89)	175,279
222	2023	Albeni Falls	Historical	580	4.988%	29	-	-	29
223	2023	Boise	Historical	1,060	5.091%	54	-	-	54
224	2023	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
225	2023	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
226	2023	Columbia Basin	Historical	30,368	4.920%	1,494	-	-	1,494
227	2023	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
228	2023	Cougar	Historical	16,684	4.576%	763	-	-	763
229	2023	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
230	2023	Dworshak	Historical	4,692	4.795%	225	-	-	225

**TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)**

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
231	2023 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
232	2023 Hills Creek	Historical	202	3.813%	8	-	-	8
233	2023 Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
234	2023 Ice Harbor	Historical	17,402	4.664%	812	-	-	812
235	2023 John Day	Historical	18,421	4.492%	827	-	-	827
236	2023 Libby	Historical	1,774	4.751%	84	-	-	84
237	2023 Little Goose	Historical	3,521	4.406%	155	-	-	155
238	2023 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
239	2023 Lost Creek	Historical	7	3.748%		-	-	
240	2023 Lower Granite	Historical	15,542	4.168%	648	-	-	648
241	2023 Lower Monument	Historical	8,303	4.723%	392	-	-	392
242	2023 Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
243	2023 McNary	Historical	13,414	4.747%	637	-	-	637
244	2023 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
245	2023 RRP - Green Springs	Historical	3	3.244%		-	-	
246	2023 The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
247	2023 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
248	2023 Bureau Direct	Historical	918,000	3.397%	31,182	-	(456)	30,726
249	2023 Conservation	Historical	378,000	2.025%	7,654	-	(947)	6,708
250	2023 Construction (AS)	Historical	14,700	2.622%	385	-	-	385
251	2023 Corps	Historical	437,389	3.158%	13,813	-	-	13,813
252	2023 Fish and Wildlife	Historical	398,000	3.177%	12,644	-	-	12,644
253	2023 Replacements	Historical	655,306	4.430%	29,030	-	-	29,030
254	2023 Replacements	New	218,435	2.215%	4,838	-	-	4,838
255	2023 Technology (G)	Historical	10,000	2.800%	280	-	-	280
256	2023 Float	Historical	-	-	(977)	-	-	(977)
257	FY 2023	Subtotal:	4,983,378		180,259	-	(1,402)	178,857
258	2024 Albeni Falls	Historical	580	4.988%	29	-	-	29
259	2024 Boise	Historical	1,060	5.091%	54	-	-	54
260	2024 Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
261	2024 Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
262	2024 Columbia Basin	Historical	30,368	4.920%	1,494	-	-	1,494
263	2024 Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
264	2024 Cougar	Historical	16,684	4.576%	763	-	-	763
265	2024 Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
266	2024 Dworshak	Historical	4,692	4.795%	225	-	-	225
267	2024 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
268	2024 Hills Creek	Historical	202	3.813%	8	-	-	8
269	2024 Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
270	2024 Ice Harbor	Historical	17,402	4.664%	812	-	-	812
271	2024 John Day	Historical	18,421	4.492%	827	-	-	827
272	2024 Libby	Historical	1,774	4.751%	84	-	-	84
273	2024 Little Goose	Historical	3,521	4.406%	155	-	-	155
274	2024 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
275	2024 Lost Creek	Historical	7	3.748%		-	-	
276	2024 Lower Granite	Historical	15,542	4.168%	648	-	-	648
277	2024 Lower Monument	Historical	8,303	4.723%	392	-	-	392
278	2024 Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
279	2024 McNary	Historical	13,414	4.747%	637	-	-	637
280	2024 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
281	2024 RRP - Green Springs	Historical	3	3.244%		-	-	
282	2024 The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
283	2024 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
284	2024 Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
285	2024 Conservation	Historical	236,000	1.202%	2,837	-	(260)	2,577
286	2024 Construction (AS)	Historical	11,550	2.926%	338	-	-	338
287	2024 Corps	Historical	437,389	3.158%	13,813	-	-	13,813
288	2024 Fish and Wildlife	Historical	398,000	3.180%	12,658	-	(244)	12,415
289	2024 Replacements	Historical	873,742	4.430%	38,707	-	-	38,707
290	2024 Replacements	New	218,435	2.215%	4,838	-	-	4,838
291	2024 Technology (G)	Historical	5,000	1.580%	79	-	-	79
292	2024 Float	Historical	-	-	(951)	-	-	(951)
293	FY 2024	Subtotal:	5,051,664		184,342	-	(503)	183,839
294	2025 Albeni Falls	Historical	580	4.988%	29	-	-	29
295	2025 Boise	Historical	1,060	5.091%	54	-	-	54
296	2025 Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
297	2025 Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
298	2025 Columbia Basin	Historical	25,489	4.737%	1,207	-	-	1,207
299	2025 Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
300	2025 Cougar	Historical	16,684	4.576%	763	-	-	763
301	2025 Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
302	2025 Dworshak	Historical	4,692	4.795%	225	-	-	225
303	2025 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
304	2025 Hills Creek	Historical	202	3.813%	8	-	-	8
305	2025 Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
306	2025 Ice Harbor	Historical	17,402	4.664%	812	-	-	812
307	2025 John Day	Historical	18,421	4.492%	827	-	-	827
308	2025 Libby	Historical	1,774	4.751%	84	-	-	84
309	2025 Little Goose	Historical	3,521	4.406%	155	-	-	155
310	2025 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
311	2025 Lost Creek	Historical	7	3.748%		-	-	

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
312	2025 Lower Granite	Historical	15,542	4.168%	648	-	-	648
313	2025 Lower Monument	Historical	8,303	4.723%	392	-	-	392
314	2025 Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
315	2025 McNary	Historical	13,414	4.747%	637	-	-	637
316	2025 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
317	2025 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
318	2025 The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
319	2025 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
320	2025 Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
321	2025 Conservation	Historical	139,000	1.507%	2,095	-	(104)	1,991
322	2025 Construction (AS)	Historical	5,950	3.270%	195	-	-	195
323	2025 Corps	Historical	437,389	3.158%	13,813	-	-	13,813
324	2025 Fish and Wildlife	Historical	373,000	3.137%	11,699	-	-	11,699
325	2025 Replacements	Historical	1,092,177	4.430%	48,383	-	-	48,383
326	2025 Replacements	New	218,435	2.215%	4,838	-	-	4,838
327	2025 Float	Historical	-	-	(847)	-	-	(847)
328	FY 2025 Subtotal:		5,132,620		191,914		(104)	191,810
329	2026 Albeni Falls	Historical	580	4.988%	29	-	-	29
330	2026 Boise	Historical	1,060	5.091%	54	-	-	54
331	2026 Bonneville Dam	Historical	104,278	5.000%	5,213	-	-	5,213
332	2026 Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
333	2026 Columbia Basin	Historical	21,762	4.542%	988	-	-	988
334	2026 Columbia River Fish Mitigation	Historical	1,593,700	4.037%	64,338	-	-	64,338
335	2026 Cougar	Historical	16,684	4.576%	763	-	-	763
336	2026 Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
337	2026 Dworshak	Historical	4,493	4.764%	214	-	-	214
338	2026 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
339	2026 Hills Creek	Historical	200	3.800%	8	-	-	8
340	2026 Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
341	2026 Ice Harbor	Historical	12,768	4.396%	561	-	-	561
342	2026 John Day	Historical	14,911	4.284%	639	-	-	639
343	2026 Libby	Historical	1,774	4.751%	84	-	-	84
344	2026 Little Goose	Historical	3,494	4.398%	154	-	-	154
345	2026 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
346	2026 Lost Creek	Historical	7	3.748%	-	-	-	-
347	2026 Lower Granite	Historical	13,411	3.964%	532	-	-	532
348	2026 Lower Monument	Historical	8,273	4.720%	391	-	-	391
349	2026 Lower Snake Fish and Wildlife	Historical	3,930	3.987%	157	-	-	157
350	2026 McNary	Historical	13,414	4.747%	637	-	-	637
351	2026 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
352	2026 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
353	2026 The Dalles	Historical	40,327	5.070%	2,044	-	-	2,044
354	2026 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
355	2026 Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
356	2026 Conservation	Historical	70,000	1.338%	937	-	(533)	404
357	2026 Corps	Historical	437,389	3.158%	13,813	-	-	13,813
358	2026 Fish and Wildlife	Historical	373,000	2.751%	10,259	-	(580)	9,680
359	2026 Replacements	Historical	1,310,612	4.430%	58,060	-	-	58,060
360	2026 Replacements	New	218,435	2.215%	4,838	-	-	4,838
361	2026 Float	Historical	-	-	(928)	-	-	(928)
362	FY 2026 Subtotal:		5,247,585		197,134		(1,113)	196,021
363	2027 Albeni Falls	Historical	580	4.988%	29	-	-	29
364	2027 Boise	Historical	1,060	5.091%	54	-	-	54
365	2027 Bonneville Dam	Historical	104,278	5.000%	5,213	-	-	5,213
366	2027 Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
367	2027 Columbia Basin	Historical	21,762	4.542%	988	-	-	988
368	2027 Columbia River Fish Mitigation	Historical	1,593,700	4.037%	64,338	-	-	64,338
369	2027 Cougar	Historical	16,684	4.576%	763	-	-	763
370	2027 Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
371	2027 Dworshak	Historical	4,493	4.764%	214	-	-	214
372	2027 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
373	2027 Hills Creek	Historical	200	3.800%	8	-	-	8
374	2027 Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
375	2027 Ice Harbor	Historical	11,778	4.314%	508	-	-	508
376	2027 John Day	Historical	14,911	4.284%	639	-	-	639
377	2027 Libby	Historical	1,774	4.751%	84	-	-	84
378	2027 Little Goose	Historical	3,494	4.398%	154	-	-	154
379	2027 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
380	2027 Lost Creek	Historical	7	3.748%	-	-	-	-
381	2027 Lower Granite	Historical	13,411	3.964%	532	-	-	532
382	2027 Lower Monument	Historical	8,273	4.720%	391	-	-	391
383	2027 Lower Snake Fish and Wildlife	Historical	3,930	3.987%	157	-	-	157
384	2027 McNary	Historical	13,414	4.747%	637	-	-	637
385	2027 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
386	2027 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
387	2027 The Dalles	Historical	40,327	5.070%	2,044	-	-	2,044
388	2027 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
389	2027 Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
390	2027 Conservation	Historical	31,000	0.682%	211	-	-	211

**TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)**

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
391	2027	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
392	2027	Fish and Wildlife	Historical	293,000	2.618%	7,670	-	(435)	7,236
393	2027	Replacements	Historical	1,529,048	4.430%	67,737	-	-	67,737
394	2027	Replacements	New	218,435	2.215%	4,838	-	-	4,838
395	2027	Float	Historical	-	-	(889)	-	-	(889)
396	FY 2027	Subtotal:		5,346,031		203,482	-	(435)	203,047
397	2028	Albeni Falls	Historical	580	4.988%	29	-	-	29
398	2028	Boise	Historical	1,060	5.091%	54	-	-	54
399	2028	Bonneville Dam	Historical	84,910	4.914%	4,172	-	-	4,172
400	2028	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
401	2028	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
402	2028	Columbia River Fish Mitigation	Historical	1,572,958	4.019%	63,224	-	-	63,224
403	2028	Cougar	Historical	16,684	4.576%	763	-	-	763
404	2028	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
405	2028	Dworshak	Historical	3,864	4.665%	180	-	-	180
406	2028	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
407	2028	Hills Creek	Historical	200	3.800%	8	-	-	8
408	2028	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
409	2028	Ice Harbor	Historical	7,552	3.720%	281	-	-	281
410	2028	John Day	Historical	12,081	4.029%	487	-	-	487
411	2028	Libby	Historical	1,774	4.751%	84	-	-	84
412	2028	Little Goose	Historical	3,426	4.379%	150	-	-	150
413	2028	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
414	2028	Lost Creek	Historical	7	3.748%	-	-	-	-
415	2028	Lower Granite	Historical	13,411	3.964%	532	-	-	532
416	2028	Lower Monument	Historical	4,850	4.258%	207	-	-	207
417	2028	Lower Snake Fish and Wildlife	Historical	3,700	3.901%	144	-	-	144
418	2028	McNary	Historical	7,276	4.218%	307	-	-	307
419	2028	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
420	2028	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
421	2028	The Dalles	Historical	40,145	5.068%	2,035	-	-	2,035
422	2028	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
423	2028	Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
424	2028	Conservation	Historical	25,000	0.366%	92	-	(76)	16
425	2028	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
426	2028	Fish and Wildlife	Historical	238,000	2.775%	6,605	-	-	6,605
427	2028	Replacements	Historical	1,747,483	4.430%	77,414	-	-	77,414
428	2028	Replacements	New	218,435	2.215%	4,838	-	-	4,838
429	2028	Float	Historical	-	-	(784)	-	-	(784)
430	FY 2028	Subtotal:		5,445,630		208,969	-	(76)	208,893
431	2029	Albeni Falls	Historical	580	4.988%	29	-	-	29
432	2029	Boise	Historical	1,060	5.091%	54	-	-	54
433	2029	Bonneville Dam	Historical	84,910	4.914%	4,172	-	-	4,172
434	2029	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
435	2029	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
436	2029	Columbia River Fish Mitigation	Historical	1,568,334	4.015%	62,975	-	-	62,975
437	2029	Cougar	Historical	16,684	4.576%	763	-	-	763
438	2029	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
439	2029	Dworshak	Historical	3,864	4.665%	180	-	-	180
440	2029	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
441	2029	Hills Creek	Historical	200	3.800%	8	-	-	8
442	2029	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
443	2029	Ice Harbor	Historical	7,552	3.720%	281	-	-	281
444	2029	John Day	Historical	12,081	4.029%	487	-	-	487
445	2029	Libby	Historical	1,774	4.751%	84	-	-	84
446	2029	Little Goose	Historical	3,426	4.379%	150	-	-	150
447	2029	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
448	2029	Lost Creek	Historical	7	3.748%	-	-	-	-
449	2029	Lower Granite	Historical	13,411	3.964%	532	-	-	532
450	2029	Lower Monument	Historical	4,850	4.258%	207	-	-	207
451	2029	Lower Snake Fish and Wildlife	Historical	3,700	3.901%	144	-	-	144
452	2029	McNary	Historical	7,276	4.218%	307	-	-	307
453	2029	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
454	2029	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
455	2029	The Dalles	Historical	40,145	5.068%	2,035	-	-	2,035
456	2029	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
457	2029	Bureau Direct	Historical	893,000	3.254%	29,056	-	(325)	28,731
458	2029	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
459	2029	Fish and Wildlife	Historical	212,000	2.402%	5,091	-	(426)	4,666
460	2029	Replacements	Historical	1,965,919	4.430%	87,090	-	-	87,090
461	2029	Replacements	New	218,435	2.215%	4,838	-	-	4,838
462	2029	Float	Historical	-	-	(1,861)	-	-	(1,861)
463	FY 2029	Subtotal:		5,583,441		214,156	-	(750)	213,405

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
464	2030	Albeni Falls	Historical	580	4.988%	29	-	-	29
465	2030	Boise	Historical	1,060	5.091%	54	-	-	54
466	2030	Bonneville Dam	Historical	53,588	4.666%	2,500	-	-	2,500
467	2030	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
468	2030	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
469	2030	Columbia River Fish Mitigation	Historical	1,424,874	3.895%	55,499	-	-	55,499
470	2030	Cougar	Historical	13,061	4.354%	569	-	-	569
471	2030	Detroit Lake/Big Cliff	Historical	1,607	4.332%	70	-	-	70
472	2030	Dworshak	Historical	3,102	4.552%	141	-	-	141
473	2030	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
474	2030	Hills Creek	Historical	154	3.404%	5	-	-	5
475	2030	Hungry Horse Dam	Historical	1,728	4.260%	74	-	-	74
476	2030	Ice Harbor	Historical	7,502	3.711%	278	-	-	278
477	2030	John Day	Historical	9,254	3.694%	342	-	-	342
478	2030	Libby	Historical	1,774	4.751%	84	-	-	84
479	2030	Little Goose	Historical	3,280	4.346%	143	-	-	143
480	2030	Lookout Dam	Historical	883	4.435%	39	-	-	39
481	2030	Lost Creek	Historical	7	3.748%	-	-	-	-
482	2030	Lower Granite	Historical	12,977	3.925%	509	-	-	509
483	2030	Lower Monument	Historical	4,301	4.148%	178	-	-	178
484	2030	Lower Snake Fish and Wildlife	Historical	3,598	3.866%	139	-	-	139
485	2030	McNary	Historical	6,630	4.130%	274	-	-	274
486	2030	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
487	2030	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
488	2030	The Dalles	Historical	4,126	4.574%	189	-	-	189
489	2030	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
490	2030	Bureau Direct	Historical	772,000	3.022%	23,331	-	(935)	22,396
491	2030	Corps	Historical	437,389	3.158%	13,813	-	(131)	13,682
492	2030	Fish and Wildlife	Historical	156,000	2.809%	4,382	-	-	4,382
493	2030	Replacements	Historical	2,184,354	4.430%	96,767	-	-	96,767
494	2030	Replacements	New	218,435	2.215%	4,838	-	-	4,838
495	2030	Float	Historical	-	-	(1,585)	-	-	(1,585)
496	FY 2030	Subtotal:		5,392,403		205,561		(1,066)	204,495
497	2031	Albeni Falls	Historical	99	4.322%	4	-	-	4
498	2031	Boise	Historical	81	4.792%	4	-	-	4
499	2031	Bonneville Dam	Historical	32,739	4.378%	1,433	-	-	1,433
500	2031	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
501	2031	Columbia Basin	Historical	9,871	3.852%	380	-	-	380
502	2031	Columbia River Fish Mitigation	Historical	1,345,001	3.827%	51,473	-	-	51,473
503	2031	Cougar	Historical	4,811	3.035%	146	-	-	146
504	2031	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
505	2031	Dworshak	Historical	2,390	4.381%	105	-	-	105
506	2031	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
507	2031	Hills Creek	Historical	154	3.404%	5	-	-	5
508	2031	Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
509	2031	Ice Harbor	Historical	7,502	3.711%	278	-	-	278
510	2031	John Day	Historical	9,021	3.660%	330	-	-	330
511	2031	Libby	Historical	1,774	4.751%	84	-	-	84
512	2031	Little Goose	Historical	3,280	4.346%	143	-	-	143
513	2031	Lookout Dam	Historical	311	3.396%	11	-	-	11
514	2031	Lost Creek	Historical	7	3.748%	-	-	-	-
515	2031	Lower Granite	Historical	12,977	3.925%	509	-	-	509
516	2031	Lower Monument	Historical	4,301	4.148%	178	-	-	178
517	2031	Lower Snake Fish and Wildlife	Historical	3,598	3.866%	139	-	-	139
518	2031	McNary	Historical	6,630	4.130%	274	-	-	274
519	2031	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
520	2031	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
521	2031	The Dalles	Historical	3,987	4.559%	182	-	-	182
522	2031	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
523	2031	Bureau Direct	Historical	583,516	2.625%	15,319	-	(991)	14,328
524	2031	Corps	Historical	422,389	3.178%	13,423	-	(585)	12,838
525	2031	Fish and Wildlife	Historical	148,000	2.900%	4,293	-	(5)	4,288
526	2031	Replacements	Historical	2,402,789	4.430%	106,444	-	-	106,444
527	2031	Replacements	New	218,435	2.215%	4,838	-	-	4,838
528	2031	Float	Historical	-	-	(1,690)	-	-	(1,690)
529	FY 2031	Subtotal:		5,274,049		200,291		(1,581)	198,710

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
530	2032 Albeni Falls	Historical	99	4.322%	4	-	-	4
531	2032 Boise	Historical	81	4.792%	4	-	-	4
532	2032 Bonneville Dam	Historical	32,739	4.378%	1,433	-	-	1,433
533	2032 Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
534	2032 Columbia Basin	Historical	9,871	3.852%	380	-	-	380
535	2032 Columbia River Fish Mitigation	Historical	1,153,947	3.716%	42,875	-	-	42,875
536	2032 Cougar	Historical	4,811	3.035%	146	-	-	146
537	2032 Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
538	2032 Dworshak	Historical	2,390	4.381%	105	-	-	105
539	2032 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
540	2032 Hills Creek	Historical	154	3.404%	5	-	-	5
541	2032 Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
542	2032 Ice Harbor	Historical	7,502	3.711%	278	-	-	278
543	2032 John Day	Historical	8,420	3.600%	303	-	-	303
544	2032 Libby	Historical	1,774	4.751%	84	-	-	84
545	2032 Little Goose	Historical	3,280	4.346%	143	-	-	143
546	2032 Lookout Dam	Historical	311	3.396%	11	-	-	11
547	2032 Lost Creek	Historical	7	3.748%	-	-	-	-
548	2032 Lower Granite	Historical	12,977	3.925%	509	-	-	509
549	2032 Lower Monument	Historical	4,016	4.123%	166	-	-	166
550	2032 Lower Snake Fish and Wildlife	Historical	3,219	3.792%	122	-	-	122
551	2032 McNary	Historical	2,550	3.537%	90	-	-	90
552	2032 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
553	2032 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
554	2032 The Dalles	Historical	1,957	4.621%	90	-	-	90
555	2032 Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
556	2032 Bureau Direct	Historical	482,000	2.668%	12,859	-	(133)	12,726
557	2032 Corps	Historical	369,389	3.252%	12,013	-	(146)	11,867
558	2032 Fish and Wildlife	Historical	135,000	3.142%	4,241	-	-	4,241
559	2032 Replacements	Historical	2,621,225	4.430%	116,120	-	-	116,120
560	2032 Replacements	New	218,435	2.215%	4,838	-	-	4,838
561	2032 Float	Historical	-	-	(2,030)	-	-	(2,030)
562	FY 2032 Subtotal:		5,126,539		196,776	-	(279)	196,497
563	2033 Albeni Falls	Historical	99	4.322%	4	-	-	4
564	2033 Boise	Historical	64	4.875%	3	-	-	3
565	2033 Bonneville Dam	Historical	30,111	4.367%	1,315	-	-	1,315
566	2033 Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
567	2033 Columbia Basin	Historical	7,884	3.688%	291	-	-	291
568	2033 Columbia River Fish Mitigation	Historical	875,403	3.481%	30,470	-	-	30,470
569	2033 Cougar	Historical	4,581	2.964%	136	-	-	136
570	2033 Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
571	2033 Dworshak	Historical	10	4.877%	-	-	-	-
572	2033 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
573	2033 Hills Creek	Historical	154	3.404%	5	-	-	5
574	2033 Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
575	2033 Ice Harbor	Historical	4,887	3.355%	164	-	-	164
576	2033 John Day	Historical	8,420	3.600%	303	-	-	303
577	2033 Libby	Historical	1,774	4.751%	84	-	-	84
578	2033 Little Goose	Historical	109	3.493%	4	-	-	4
579	2033 Lookout Dam	Historical	311	3.396%	11	-	-	11
580	2033 Lost Creek	Historical	7	3.748%	-	-	-	-
581	2033 Lower Granite	Historical	7,308	3.576%	261	-	-	261
582	2033 Lower Monument	Historical	1,684	3.773%	64	-	-	64
583	2033 Lower Snake Fish and Wildlife	Historical	1,685	3.261%	55	-	-	55
584	2033 McNary	Historical	2,550	3.537%	90	-	-	90
585	2033 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
586	2033 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
587	2033 The Dalles	Historical	1,957	4.621%	90	-	-	90
588	2033 Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
589	2033 Bureau Direct	Historical	416,000	2.223%	9,246	-	(827)	8,419
590	2033 Corps	Historical	288,000	2.967%	8,545	-	(439)	8,105
591	2033 Fish and Wildlife	Historical	95,000	3.546%	3,369	-	-	3,369
592	2033 Replacements	Historical	2,839,660	4.430%	125,797	-	-	125,797
593	2033 Replacements	New	218,435	2.215%	4,838	-	-	4,838
594	2033 Float	Historical	-	-	(2,048)	-	-	(2,048)
595	FY 2033 Subtotal:		4,856,478		185,083	-	(1,266)	183,817
596	2034 Albeni Falls	Historical	57	4.375%	2	-	-	2
597	2034 Boise	Historical	64	4.875%	3	-	-	3
598	2034 Bonneville Dam	Historical	25,942	4.373%	1,134	-	-	1,134
599	2034 Chief Joseph	Historical	3,542	4.856%	172	-	-	172
600	2034 Columbia Basin	Historical	7,007	3.618%	254	-	-	254
601	2034 Columbia River Fish Mitigation	Historical	818,572	3.427%	28,055	-	-	28,055
602	2034 Cougar	Historical	4,522	2.947%	133	-	-	133
603	2034 Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
604	2034 Dworshak	Historical	10	4.877%	-	-	-	-
605	2034 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
606	2034 Hills Creek	Historical	154	3.404%	5	-	-	5
607	2034 Hungry Horse Dam	Historical	654	3.939%	26	-	-	26
608	2034 Ice Harbor	Historical	4,680	3.316%	155	-	-	155

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A		B	D	E	F	G	H	I	J
Fiscal Year		Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
609	2034	John Day	Historical	8,064	3.571%	288	-	-	288
610	2034	Libby	Historical	1,734	4.763%	83	-	-	83
611	2034	Little Goose	Historical	79	3.203%	3	-	-	3
612	2034	Lookout Dam	Historical	311	3.396%	11	-	-	11
613	2034	Lost Creek	Historical	7	3.748%	-	-	-	-
614	2034	Lower Granite	Historical	6,152	3.449%	212	-	-	212
615	2034	Lower Monument	Historical	1,684	3.773%	64	-	-	64
616	2034	Lower Snake Fish and Wildlife	Historical	1,674	3.254%	54	-	-	54
617	2034	McNary	Historical	2,550	3.537%	90	-	-	90
618	2034	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
619	2034	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
620	2034	The Dalles	Historical	1,957	4.621%	90	-	-	90
621	2034	Yakima Chandler/Kenwick	Historical	15	4.377%	1	-	-	1
622	2034	Bureau Direct	Historical	194,000	1.671%	3,241	-	(417)	2,824
623	2034	Corps	Historical	146,409	2.913%	4,265	-	(392)	3,873
624	2034	Fish and Wildlife	Historical	44,000	3.890%	1,712	-	-	1,712
625	2034	Replacements	Historical	3,058,096	4.430%	135,474	-	-	135,474
626	2034	Replacements	New	218,435	2.215%	4,838	-	-	4,838
627	2034	Float	Historical	-	-	(2,038)	-	-	(2,038)
628	FY 2034	Subtotal:		4,571,037		179,000	-	(809)	178,191
629	2035	Albeni Falls	Historical	57	4.375%	2	-	-	2
630	2035	Boise	Historical	64	4.875%	3	-	-	3
631	2035	Bonneville Dam	Historical	25,941	4.373%	1,134	-	-	1,134
632	2035	Chief Joseph	Historical	3,542	4.856%	172	-	-	172
633	2035	Columbia Basin	Historical	5,266	3.574%	188	-	-	188
634	2035	Columbia River Fish Mitigation	Historical	582,535	3.260%	18,989	-	-	18,989
635	2035	Cougar	Historical	4,511	2.945%	133	-	-	133
636	2035	Detroit Lake/Big Cliff	Historical	558	2.882%	16	-	-	16
637	2035	Dworshak	Historical	10	4.877%	-	-	-	-
638	2035	Green Peter/Foster	Historical	166	3.166%	5	-	-	5
639	2035	Hills Creek	Historical	142	3.375%	5	-	-	5
640	2035	Hungry Horse Dam	Historical	139	4.628%	6	-	-	6
641	2035	Ice Harbor	Historical	3,862	3.224%	124	-	-	124
642	2035	John Day	Historical	7,890	3.567%	281	-	-	281
643	2035	Libby	Historical	1,582	4.860%	77	-	-	77
644	2035	Little Goose	Historical	79	3.203%	3	-	-	3
645	2035	Lookout Dam	Historical	294	3.375%	10	-	-	10
646	2035	Lower Granite	Historical	3,499	3.127%	109	-	-	109
647	2035	Lower Monument	Historical	254	3.199%	8	-	-	8
648	2035	Lower Snake Fish and Wildlife	Historical	1,452	3.159%	46	-	-	46
649	2035	McNary	Historical	1,226	3.230%	40	-	-	40
650	2035	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
651	2035	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
652	2035	The Dalles	Historical	1,957	4.621%	90	-	-	90
653	2035	Yakima Chandler/Kenwick	Historical	15	4.377%	1	-	-	1
654	2035	Bureau Direct	Historical	64,000	1.878%	1,202	-	-	1,202
655	2035	Corps	Historical	56,000	3.189%	1,786	-	-	1,786
656	2035	Replacements	Historical	3,276,531	4.430%	145,150	-	-	145,150
657	2035	Replacements	New	218,435	2.215%	4,838	-	-	4,838
658	2035	Float	Historical	-	-	(2,068)	-	-	(2,068)
659	FY 2035	Subtotal:		4,279,461		172,984	-	-	172,984
660	2036	Albeni Falls	Historical	57	4.375%	2	-	-	2
661	2036	Boise	Historical	64	4.875%	3	-	-	3
662	2036	Bonneville Dam	Historical	14,877	4.839%	720	-	-	720
663	2036	Chief Joseph	Historical	3,510	4.869%	171	-	-	171
664	2036	Columbia Basin	Historical	4,344	3.721%	162	-	-	162
665	2036	Columbia River Fish Mitigation	Historical	195,458	3.088%	6,036	-	-	6,036
666	2036	Cougar	Historical	4,088	2.875%	118	-	-	118
667	2036	Detroit Lake/Big Cliff	Historical	528	2.875%	15	-	-	15
668	2036	Dworshak	Historical	10	4.877%	-	-	-	-
669	2036	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
670	2036	Ice Harbor	Historical	14	4.874%	1	-	-	1
671	2036	John Day	Historical	1,565	4.358%	68	-	-	68
672	2036	Libby	Historical	1,567	4.875%	76	-	-	76
673	2036	Little Goose	Historical	79	3.203%	3	-	-	3
674	2036	Lower Granite	Historical	24	4.875%	1	-	-	1
675	2036	Lower Monument	Historical	9	4.871%	-	-	-	-
676	2036	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
677	2036	McNary	Historical	1,215	3.229%	39	-	-	39
678	2036	The Dalles	Historical	1,651	4.875%	80	-	-	80
679	2036	Yakima Chandler/Kenwick	Historical	15	4.377%	1	-	-	1
680	2036	Bureau Direct	Historical	32,479	0.363%	118	-	(39)	79
681	2036	Corps	Historical	2,396	0.434%	10	-	(2)	9
682	2036	Replacements	Historical	3,494,966	4.215%	147,324	-	-	147,324
683	2036	Replacements	New	218,435	2.215%	4,838	-	-	4,838
684	2036	Float	Historical	-	-	(2,154)	-	-	(2,154)
685	FY 2036	Subtotal:		3,977,563		157,643	-	(41)	157,603

TABLE 12C:
Interest Calculation Summary
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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
686	2037	Albeni Falls	Historical	57	4.375%	2	-	-	2
687	2037	Boise	Historical	64	4.875%	3	-	-	3
688	2037	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
689	2037	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
690	2037	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
691	2037	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
692	2037	Dworshak	Historical	10	4.877%	-	-	-	-
693	2037	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
694	2037	Ice Harbor	Historical	14	4.874%	1	-	-	1
695	2037	John Day	Historical	1,548	4.375%	68	-	-	68
696	2037	Libby	Historical	1,567	4.875%	76	-	-	76
697	2037	Little Goose	Historical	13	4.877%	1	-	-	1
698	2037	Lower Granite	Historical	24	4.875%	1	-	-	1
699	2037	Lower Monument	Historical	9	4.871%	-	-	-	-
700	2037	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
701	2037	McNary	Historical	215	4.875%	10	-	-	10
702	2037	The Dalles	Historical	1,651	4.875%	80	-	-	80
703	2037	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
704	2037	Replacements	Historical	3,374,651	4.056%	136,883	-	-	136,883
705	2037	Replacements	New	218,435	2.215%	4,838	-	-	4,838
706	2037	Float	Historical	-	-	(2,165)	-	-	(2,165)
707	FY 2037	Subtotal:		3,655,320		142,575	-	-	142,575
708	2038	Albeni Falls	Historical	57	4.375%	2	-	-	2
709	2038	Boise	Historical	64	4.875%	3	-	-	3
710	2038	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
711	2038	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
712	2038	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
713	2038	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
714	2038	Dworshak	Historical	10	4.877%	-	-	-	-
715	2038	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
716	2038	Ice Harbor	Historical	14	4.874%	1	-	-	1
717	2038	John Day	Historical	1,548	4.375%	68	-	-	68
718	2038	Libby	Historical	1,567	4.875%	76	-	-	76
719	2038	Little Goose	Historical	13	4.877%	1	-	-	1
720	2038	Lower Granite	Historical	24	4.875%	1	-	-	1
721	2038	Lower Monument	Historical	9	4.871%	-	-	-	-
722	2038	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
723	2038	McNary	Historical	215	4.875%	10	-	-	10
724	2038	The Dalles	Historical	1,651	4.875%	80	-	-	80
725	2038	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
726	2038	Replacements	Historical	3,023,595	3.982%	120,393	-	-	120,393
727	2038	Replacements	New	218,435	2.215%	4,838	-	-	4,838
728	2038	Float	Historical	-	-	(2,224)	-	-	(2,224)
729	FY 2038	Subtotal:		3,304,265		126,026	-	-	126,026
730	2039	Albeni Falls	Historical	57	4.375%	2	-	-	2
731	2039	Boise	Historical	64	4.875%	3	-	-	3
732	2039	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
733	2039	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
734	2039	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
735	2039	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
736	2039	Dworshak	Historical	10	4.877%	-	-	-	-
737	2039	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
738	2039	Ice Harbor	Historical	14	4.874%	1	-	-	1
739	2039	John Day	Historical	1,548	4.375%	68	-	-	68
740	2039	Libby	Historical	1,567	4.875%	76	-	-	76
741	2039	Little Goose	Historical	13	4.877%	1	-	-	1
742	2039	Lower Granite	Historical	24	4.875%	1	-	-	1
743	2039	Lower Monument	Historical	9	4.871%	-	-	-	-
744	2039	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
745	2039	McNary	Historical	215	4.875%	10	-	-	10
746	2039	The Dalles	Historical	1,651	4.875%	80	-	-	80
747	2039	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
748	2039	Replacements	Historical	2,630,190	3.884%	102,158	-	-	102,158
749	2039	Replacements	New	218,435	2.215%	4,838	-	-	4,838
750	2039	Float	Historical	-	-	(2,360)	-	-	(2,360)
751	FY 2039	Subtotal:		2,910,860		107,656	-	-	107,656

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
752	2040	Albeni Falls	Historical	57	4.375%	2	-	-	2
753	2040	Boise	Historical	64	4.875%	3	-	-	3
754	2040	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
755	2040	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
756	2040	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
757	2040	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
758	2040	Dworshak	Historical	10	4.877%	-	-	-	-
759	2040	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
760	2040	Ice Harbor	Historical	14	4.874%	1	-	-	1
761	2040	John Day	Historical	1,548	4.375%	68	-	-	68
762	2040	Libby	Historical	1,567	4.875%	76	-	-	76
763	2040	Little Goose	Historical	13	4.877%	1	-	-	1
764	2040	Lower Granite	Historical	24	4.875%	1	-	-	1
765	2040	Lower Monument	Historical	9	4.871%	-	-	-	-
766	2040	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
767	2040	McNary	Historical	215	4.875%	10	-	-	10
768	2040	The Dalles	Historical	1,651	4.875%	80	-	-	80
769	2040	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
770	2040	Replacements	Historical	2,200,364	3.741%	82,311	-	-	82,311
771	2040	Replacements	New	218,435	2.215%	4,838	-	-	4,838
772	2040	Float	Historical	-	-	(2,399)	-	-	(2,399)
773	FY 2040	Subtotal:		2,481,033		87,770	-	-	87,770
774	2041	Albeni Falls	Historical	57	4.375%	2	-	-	2
775	2041	Boise	Historical	64	4.875%	3	-	-	3
776	2041	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
777	2041	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
778	2041	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
779	2041	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
780	2041	Dworshak	Historical	10	4.877%	-	-	-	-
781	2041	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
782	2041	Ice Harbor	Historical	14	4.874%	1	-	-	1
783	2041	John Day	Historical	1,548	4.375%	68	-	-	68
784	2041	Libby	Historical	1,567	4.875%	76	-	-	76
785	2041	Little Goose	Historical	13	4.877%	1	-	-	1
786	2041	Lower Granite	Historical	24	4.875%	1	-	-	1
787	2041	Lower Monument	Historical	9	4.871%	-	-	-	-
788	2041	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
789	2041	McNary	Historical	215	4.875%	10	-	-	10
790	2041	The Dalles	Historical	1,651	4.875%	80	-	-	80
791	2041	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
792	2041	Replacements	Historical	1,734,160	3.519%	61,032	-	-	61,032
793	2041	Replacements	New	218,435	2.215%	4,838	-	-	4,838
794	2041	Float	Historical	-	-	(2,456)	-	-	(2,456)
795	FY 2041	Subtotal:		2,014,830		66,433	-	-	66,433
796	2042	Albeni Falls	Historical	57	4.375%	2	-	-	2
797	2042	Boise	Historical	64	4.875%	3	-	-	3
798	2042	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
799	2042	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
800	2042	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
801	2042	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
802	2042	Dworshak	Historical	10	4.877%	-	-	-	-
803	2042	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
804	2042	Ice Harbor	Historical	14	4.874%	1	-	-	1
805	2042	John Day	Historical	1,548	4.375%	68	-	-	68
806	2042	Libby	Historical	1,567	4.875%	76	-	-	76
807	2042	Little Goose	Historical	13	4.877%	1	-	-	1
808	2042	Lower Granite	Historical	24	4.875%	1	-	-	1
809	2042	Lower Monument	Historical	9	4.871%	-	-	-	-
810	2042	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
811	2042	McNary	Historical	215	4.875%	10	-	-	10
812	2042	The Dalles	Historical	1,651	4.875%	80	-	-	80
813	2042	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
814	2042	Replacements	Historical	1,239,687	3.251%	40,299	-	-	40,299
815	2042	Replacements	New	218,435	2.215%	4,838	-	-	4,838
816	2042	Float	Historical	-	-	(2,492)	-	-	(2,492)
817	FY 2042	Subtotal:		1,520,357		45,663	-	-	45,663

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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
818	2043	Albeni Falls	Historical	57	4.375%	2	-	-	2
819	2043	Boise	Historical	64	4.875%	3	-	-	3
820	2043	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
821	2043	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
822	2043	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
823	2043	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
824	2043	Dworshak	Historical	10	4.877%	-	-	-	-
825	2043	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
826	2043	Ice Harbor	Historical	14	4.874%	1	-	-	1
827	2043	John Day	Historical	1,548	4.375%	68	-	-	68
828	2043	Libby	Historical	1,567	4.875%	76	-	-	76
829	2043	Little Goose	Historical	13	4.877%	1	-	-	1
830	2043	Lower Granite	Historical	24	4.875%	1	-	-	1
831	2043	Lower Monument	Historical	9	4.871%	-	-	-	-
832	2043	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
833	2043	McNary	Historical	215	4.875%	10	-	-	10
834	2043	The Dalles	Historical	1,651	4.875%	80	-	-	80
835	2043	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
836	2043	Replacements	Historical	798,102	2.334%	18,624	-	-	18,624
837	2043	Replacements	New	218,435	2.215%	4,838	-	-	4,838
838	2043	Float	Historical	-	-	(2,525)	-	-	(2,525)
839	FY 2043	Subtotal:		1,078,772		23,956	-	-	23,956
840	2044	Albeni Falls	Historical	57	4.375%	2	-	-	2
841	2044	Boise	Historical	64	4.875%	3	-	-	3
842	2044	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
843	2044	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
844	2044	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
845	2044	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
846	2044	Dworshak	Historical	10	4.877%	-	-	-	-
847	2044	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
848	2044	Ice Harbor	Historical	14	4.874%	1	-	-	1
849	2044	John Day	Historical	1,548	4.375%	68	-	-	68
850	2044	Libby	Historical	1,567	4.875%	76	-	-	76
851	2044	Little Goose	Historical	13	4.877%	1	-	-	1
852	2044	Lower Granite	Historical	24	4.875%	1	-	-	1
853	2044	Lower Monument	Historical	9	4.871%	-	-	-	-
854	2044	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
855	2044	McNary	Historical	215	4.875%	10	-	-	10
856	2044	The Dalles	Historical	1,651	4.875%	80	-	-	80
857	2044	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
858	2044	Replacements	Historical	261,149	2.215%	5,784	-	-	5,784
859	2044	Replacements	New	218,435	2.215%	4,838	-	-	4,838
860	2044	Float	Historical	-	-	(2,172)	-	-	(2,172)
861	FY 2044	Subtotal:		541,818		11,469	-	-	11,469
862	2045	Albeni Falls	Historical	57	4.375%	2	-	-	2
863	2045	Boise	Historical	64	4.875%	3	-	-	3
864	2045	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
865	2045	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
866	2045	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
867	2045	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
868	2045	Dworshak	Historical	10	4.877%	-	-	-	-
869	2045	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
870	2045	Ice Harbor	Historical	14	4.874%	1	-	-	1
871	2045	John Day	Historical	1,548	4.375%	68	-	-	68
872	2045	Libby	Historical	1,567	4.875%	76	-	-	76
873	2045	Little Goose	Historical	13	4.877%	1	-	-	1
874	2045	Lower Granite	Historical	24	4.875%	1	-	-	1
875	2045	Lower Monument	Historical	9	4.871%	-	-	-	-
876	2045	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
877	2045	McNary	Historical	215	4.875%	10	-	-	10
878	2045	The Dalles	Historical	1,651	4.875%	80	-	-	80
879	2045	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
880	2045	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
881	2045	Replacements	New	218,435	2.215%	4,838	-	-	4,838
882	2045	Float	Historical	-	-	(1,008)	-	-	(1,008)
883	FY 2045	Subtotal:		499,105		11,687	-	-	11,687

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
884	2046	Albeni Falls	Historical	57	4.375%	2	-	-	2
885	2046	Boise	Historical	64	4.875%	3	-	-	3
886	2046	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
887	2046	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
888	2046	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
889	2046	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
890	2046	Dworshak	Historical	10	4.877%	-	-	-	-
891	2046	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
892	2046	Ice Harbor	Historical	14	4.874%	1	-	-	1
893	2046	John Day	Historical	1,548	4.375%	68	-	-	68
894	2046	Libby	Historical	1,567	4.875%	76	-	-	76
895	2046	Little Goose	Historical	13	4.877%	1	-	-	1
896	2046	Lower Granite	Historical	24	4.875%	1	-	-	1
897	2046	Lower Monument	Historical	9	4.871%	-	-	-	-
898	2046	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
899	2046	McNary	Historical	215	4.875%	10	-	-	10
900	2046	The Dalles	Historical	1,651	4.875%	80	-	-	80
901	2046	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
902	2046	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
903	2046	Replacements	New	218,435	2.215%	4,838	-	-	4,838
904	2046	Float	Historical	-	-	(1,008)	-	-	(1,008)
905	FY 2046	Subtotal:		499,105		11,687	-	-	11,687
906	2047	Albeni Falls	Historical	57	4.375%	2	-	-	2
907	2047	Boise	Historical	64	4.875%	3	-	-	3
908	2047	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
909	2047	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
910	2047	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
911	2047	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
912	2047	Dworshak	Historical	10	4.877%	-	-	-	-
913	2047	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
914	2047	Ice Harbor	Historical	14	4.874%	1	-	-	1
915	2047	John Day	Historical	1,548	4.375%	68	-	-	68
916	2047	Libby	Historical	1,567	4.875%	76	-	-	76
917	2047	Little Goose	Historical	13	4.877%	1	-	-	1
918	2047	Lower Granite	Historical	24	4.875%	1	-	-	1
919	2047	Lower Monument	Historical	9	4.871%	-	-	-	-
920	2047	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
921	2047	McNary	Historical	215	4.875%	10	-	-	10
922	2047	The Dalles	Historical	1,651	4.875%	80	-	-	80
923	2047	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
924	2047	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
925	2047	Replacements	New	218,435	2.215%	4,838	-	-	4,838
926	2047	Float	Historical	-	-	(1,008)	-	-	(1,008)
927	FY 2047	Subtotal:		499,105		11,687	-	-	11,687
928	2048	Albeni Falls	Historical	57	4.375%	2	-	-	2
929	2048	Boise	Historical	64	4.875%	3	-	-	3
930	2048	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
931	2048	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
932	2048	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
933	2048	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
934	2048	Dworshak	Historical	10	4.877%	-	-	-	-
935	2048	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
936	2048	Ice Harbor	Historical	14	4.874%	1	-	-	1
937	2048	John Day	Historical	1,548	4.375%	68	-	-	68
938	2048	Libby	Historical	1,567	4.875%	76	-	-	76
939	2048	Little Goose	Historical	13	4.877%	1	-	-	1
940	2048	Lower Granite	Historical	24	4.875%	1	-	-	1
941	2048	Lower Monument	Historical	9	4.871%	-	-	-	-
942	2048	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
943	2048	McNary	Historical	215	4.875%	10	-	-	10
944	2048	The Dalles	Historical	1,651	4.875%	80	-	-	80
945	2048	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
946	2048	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
947	2048	Replacements	New	218,435	2.215%	4,838	-	-	4,838
948	2048	Float	Historical	-	-	(1,008)	-	-	(1,008)
949	FY 2048	Subtotal:		499,105		11,687	-	-	11,687
950	2049	Albeni Falls	Historical	57	4.375%	2	-	-	2
951	2049	Boise	Historical	64	4.875%	3	-	-	3
952	2049	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
953	2049	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
954	2049	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
955	2049	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
956	2049	Dworshak	Historical	10	4.877%	-	-	-	-
957	2049	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
958	2049	Ice Harbor	Historical	14	4.874%	1	-	-	1
959	2049	John Day	Historical	1,548	4.375%	68	-	-	68
960	2049	Libby	Historical	1,567	4.875%	76	-	-	76
961	2049	Little Goose	Historical	13	4.877%	1	-	-	1
962	2049	Lower Granite	Historical	24	4.875%	1	-	-	1
963	2049	Lower Monument	Historical	9	4.871%	-	-	-	-
964	2049	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
965	2049	McNary	Historical	215	4.875%	10	-	-	10
966	2049	The Dalles	Historical	1,651	4.875%	80	-	-	80
967	2049	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
968	2049	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
969	2049	Replacements	New	218,435	2.215%	4,838	-	-	4,838
970	2049	Float	Historical	-	-	(1,008)	-	-	(1,008)
971	FY 2049	Subtotal:		499,105		11,687	-	-	11,687

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
972	2050	Albeni Falls	Historical	57	4.375%	2	-	-	2
973	2050	Boise	Historical	64	4.875%	3	-	-	3
974	2050	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
975	2050	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
976	2050	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
977	2050	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
978	2050	Dworshak	Historical	10	4.877%	-	-	-	-
979	2050	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
980	2050	Ice Harbor	Historical	14	4.874%	1	-	-	1
981	2050	John Day	Historical	1,548	4.375%	68	-	-	68
982	2050	Libby	Historical	1,567	4.875%	76	-	-	76
983	2050	Little Goose	Historical	13	4.877%	1	-	-	1
984	2050	Lower Granite	Historical	24	4.875%	1	-	-	1
985	2050	Lower Monument	Historical	9	4.871%	-	-	-	-
986	2050	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
987	2050	McNary	Historical	215	4.875%	10	-	-	10
988	2050	The Dalles	Historical	1,651	4.875%	80	-	-	80
989	2050	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
990	2050	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
991	2050	Replacements	New	218,435	2.215%	4,838	-	-	4,838
992	2050	Float	Historical	-	-	(1,008)	-	-	(1,008)
993	FY 2050	Subtotal:		499,105		11,687	-	-	11,687
994	2051	Albeni Falls	Historical	57	4.375%	2	-	-	2
995	2051	Boise	Historical	64	4.875%	3	-	-	3
996	2051	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
997	2051	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
998	2051	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
999	2051	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1000	2051	Dworshak	Historical	10	4.877%	-	-	-	-
1001	2051	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1002	2051	Ice Harbor	Historical	14	4.874%	1	-	-	1
1003	2051	John Day	Historical	1,548	4.375%	68	-	-	68
1004	2051	Libby	Historical	1,567	4.875%	76	-	-	76
1005	2051	Little Goose	Historical	13	4.877%	1	-	-	1
1006	2051	Lower Granite	Historical	24	4.875%	1	-	-	1
1007	2051	Lower Monument	Historical	9	4.871%	-	-	-	-
1008	2051	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1009	2051	McNary	Historical	215	4.875%	10	-	-	10
1010	2051	The Dalles	Historical	1,651	4.875%	80	-	-	80
1011	2051	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1012	2051	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1013	2051	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1014	2051	Float	Historical	-	-	(1,008)	-	-	(1,008)
1015	FY 2051	Subtotal:		499,105		11,687	-	-	11,687
1016	2052	Albeni Falls	Historical	57	4.375%	2	-	-	2
1017	2052	Boise	Historical	64	4.875%	3	-	-	3
1018	2052	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1019	2052	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1020	2052	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1021	2052	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1022	2052	Dworshak	Historical	10	4.877%	-	-	-	-
1023	2052	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1024	2052	Ice Harbor	Historical	14	4.874%	1	-	-	1
1025	2052	John Day	Historical	1,548	4.375%	68	-	-	68
1026	2052	Libby	Historical	1,567	4.875%	76	-	-	76
1027	2052	Little Goose	Historical	13	4.877%	1	-	-	1
1028	2052	Lower Granite	Historical	24	4.875%	1	-	-	1
1029	2052	Lower Monument	Historical	9	4.871%	-	-	-	-
1030	2052	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1031	2052	McNary	Historical	215	4.875%	10	-	-	10
1032	2052	The Dalles	Historical	1,651	4.875%	80	-	-	80
1033	2052	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1034	2052	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1035	2052	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1036	2052	Float	Historical	-	-	(1,008)	-	-	(1,008)
1037	FY 2052	Subtotal:		499,105		11,687	-	-	11,687
1038	2053	Albeni Falls	Historical	57	4.375%	2	-	-	2
1039	2053	Boise	Historical	64	4.875%	3	-	-	3
1040	2053	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1041	2053	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1042	2053	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1043	2053	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1044	2053	Dworshak	Historical	10	4.877%	-	-	-	-
1045	2053	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1046	2053	Ice Harbor	Historical	14	4.874%	1	-	-	1
1047	2053	John Day	Historical	1,548	4.375%	68	-	-	68
1048	2053	Libby	Historical	1,567	4.875%	76	-	-	76
1049	2053	Little Goose	Historical	13	4.877%	1	-	-	1

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1050	2053	Lower Granite	Historical	24	4.875%	1	-	-	1
1051	2053	Lower Monument	Historical	9	4.871%	-	-	-	-
1052	2053	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1053	2053	McNary	Historical	215	4.875%	10	-	-	10
1054	2053	The Dalles	Historical	1,651	4.875%	80	-	-	80
1055	2053	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1056	2053	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1057	2053	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1058	2053	Float	Historical	-	-	(1,008)	-	-	(1,008)
1059	FY 2053	Subtotal:		499,105		11,687	-	-	11,687
1060	2054	Albeni Falls	Historical	57	4.375%	2	-	-	2
1061	2054	Boise	Historical	64	4.875%	3	-	-	3
1062	2054	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1063	2054	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1064	2054	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1065	2054	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1066	2054	Dworshak	Historical	10	4.877%	-	-	-	-
1067	2054	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1068	2054	Ice Harbor	Historical	14	4.874%	1	-	-	1
1069	2054	John Day	Historical	1,548	4.375%	68	-	-	68
1070	2054	Libby	Historical	1,567	4.875%	76	-	-	76
1071	2054	Little Goose	Historical	13	4.877%	1	-	-	1
1072	2054	Lower Granite	Historical	24	4.875%	1	-	-	1
1073	2054	Lower Monument	Historical	9	4.871%	-	-	-	-
1074	2054	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1075	2054	McNary	Historical	215	4.875%	10	-	-	10
1076	2054	The Dalles	Historical	1,651	4.875%	80	-	-	80
1077	2054	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1078	2054	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1079	2054	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1080	2054	Float	Historical	-	-	(1,008)	-	-	(1,008)
1081	FY 2054	Subtotal:		499,105		11,687	-	-	11,687
1082	2055	Albeni Falls	Historical	57	4.375%	2	-	-	2
1083	2055	Boise	Historical	64	4.875%	3	-	-	3
1084	2055	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1085	2055	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1086	2055	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1087	2055	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1088	2055	Dworshak	Historical	10	4.877%	-	-	-	-
1089	2055	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1090	2055	Ice Harbor	Historical	14	4.874%	1	-	-	1
1091	2055	John Day	Historical	1,548	4.375%	68	-	-	68
1092	2055	Libby	Historical	1,567	4.875%	76	-	-	76
1093	2055	Little Goose	Historical	13	4.877%	1	-	-	1
1094	2055	Lower Granite	Historical	24	4.875%	1	-	-	1
1095	2055	Lower Monument	Historical	9	4.871%	-	-	-	-
1096	2055	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1097	2055	McNary	Historical	215	4.875%	10	-	-	10
1098	2055	The Dalles	Historical	1,651	4.875%	80	-	-	80
1099	2055	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1100	2055	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1101	2055	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1102	2055	Float	Historical	-	-	(1,008)	-	-	(1,008)
1103	FY 2055	Subtotal:		499,105		11,687	-	-	11,687
1104	2056	Albeni Falls	Historical	57	4.375%	2	-	-	2
1105	2056	Boise	Historical	64	4.875%	3	-	-	3
1106	2056	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1107	2056	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1108	2056	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1109	2056	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1110	2056	Dworshak	Historical	10	4.877%	-	-	-	-
1111	2056	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1112	2056	Ice Harbor	Historical	14	4.874%	1	-	-	1
1113	2056	John Day	Historical	1,548	4.375%	68	-	-	68
1114	2056	Libby	Historical	1,567	4.875%	76	-	-	76
1115	2056	Little Goose	Historical	13	4.877%	1	-	-	1
1116	2056	Lower Granite	Historical	24	4.875%	1	-	-	1
1117	2056	Lower Monument	Historical	9	4.871%	-	-	-	-
1118	2056	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1119	2056	McNary	Historical	215	4.875%	10	-	-	10
1120	2056	The Dalles	Historical	1,651	4.875%	80	-	-	80
1121	2056	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1122	2056	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1123	2056	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1124	2056	Float	Historical	-	-	(1,008)	-	-	(1,008)
1125	FY 2056	Subtotal:		499,105		11,687	-	-	11,687
1126	2057	Albeni Falls	Historical	57	4.375%	2	-	-	2
1127	2057	Boise	Historical	64	4.875%	3	-	-	3
1128	2057	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1129	2057	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1130	2057	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1131	2057	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1132	2057	Dworshak	Historical	10	4.877%	-	-	-	-
1133	2057	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1134	2057	Ice Harbor	Historical	14	4.874%	1	-	-	1

TABLE 12C:
Interest Calculation Summary
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1135	2057	John Day	Historical	1,548	4.375%	68	-	-	68
1136	2057	Libby	Historical	1,567	4.875%	76	-	-	76
1137	2057	Little Goose	Historical	13	4.877%	1	-	-	1
1138	2057	Lower Granite	Historical	24	4.875%	1	-	-	1
1139	2057	Lower Monument	Historical	9	4.871%	-	-	-	-
1140	2057	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1141	2057	McNary	Historical	215	4.875%	10	-	-	10
1142	2057	The Dalles	Historical	1,651	4.875%	80	-	-	80
1143	2057	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1144	2057	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1145	2057	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1146	2057	Float	Historical	-	-	(1,008)	-	-	(1,008)
1147	FY 2057	Subtotal:		499,105		11,687			11,687
1148	2058	Albeni Falls	Historical	57	4.375%	2	-	-	2
1149	2058	Boise	Historical	64	4.875%	3	-	-	3
1150	2058	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1151	2058	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1152	2058	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1153	2058	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1154	2058	Dworshak	Historical	10	4.877%	-	-	-	-
1155	2058	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1156	2058	Ice Harbor	Historical	14	4.874%	1	-	-	1
1157	2058	John Day	Historical	1,548	4.375%	68	-	-	68
1158	2058	Libby	Historical	1,567	4.875%	76	-	-	76
1159	2058	Little Goose	Historical	13	4.877%	1	-	-	1
1160	2058	Lower Granite	Historical	24	4.875%	1	-	-	1
1161	2058	Lower Monument	Historical	9	4.871%	-	-	-	-
1162	2058	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1163	2058	McNary	Historical	215	4.875%	10	-	-	10
1164	2058	The Dalles	Historical	1,651	4.875%	80	-	-	80
1165	2058	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1166	2058	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1167	2058	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1168	2058	Float	Historical	-	-	(1,008)	-	-	(1,008)
1169	FY 2058	Subtotal:		499,105		11,687			11,687
1170	2059	Albeni Falls	Historical	57	4.375%	2	-	-	2
1171	2059	Columbia Basin	Historical	1,338	4.375%	59	-	-	59
1172	2059	Hungry Horse Dam	Historical	60	4.376%	3	-	-	3
1173	2059	John Day	Historical	1,548	4.375%	68	-	-	68
1174	2059	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1175	2059	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1176	2059	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1177	2059	Float	Historical	-	-	(1,008)	-	-	(1,008)
1178	FY 2059	Subtotal:		439,889		8,800			8,800
1179	2060	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1180	2060	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1181	2060	Float	Historical	-	-	(1,008)	-	-	(1,008)
1182	FY 2060	Subtotal:		436,871		8,668			8,668
1183	2061	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1184	2061	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1185	2061	Float	Historical	-	-	(1,008)	-	-	(1,008)
1186	FY 2061	Subtotal:		436,871		8,668			8,668
1187	2062	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1188	2062	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1189	2062	Float	Historical	-	-	(1,008)	-	-	(1,008)
1190	FY 2062	Subtotal:		436,871		8,668			8,668
1191	2063	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1192	2063	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1193	2063	Float	Historical	-	-	(1,008)	-	-	(1,008)
1194	FY 2063	Subtotal:		436,871		8,668			8,668
1195	2064	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1196	2064	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1197	2064	Float	Historical	-	-	(1,008)	-	-	(1,008)
1198	FY 2064	Subtotal:		436,871		8,668			8,668
1199	2065	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1200	2065	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1201	2065	Float	Historical	-	-	(1,008)	-	-	(1,008)
1202	FY 2065	Subtotal:		436,871		8,668			8,668
1203	2066	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1204	2066	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1205	2066	Float	Historical	-	-	(1,008)	-	-	(1,008)
1206	FY 2066	Subtotal:		436,871		8,668			8,668
1207	2067	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1208	2067	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1209	2067	Float	Historical	-	-	(1,008)	-	-	(1,008)
1210	FY 2067	Subtotal:		436,871		8,668			8,668
1211	2068	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1212	2068	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1213	2068	Float	Historical	-	-	(1,008)	-	-	(1,008)
1214	FY 2068	Subtotal:		436,871		8,668			8,668
1215	2069	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1216	2069	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1217	2069	Float	Historical	-	-	(1,008)	-	-	(1,008)
1218	FY 2069	Subtotal:		436,871		8,668			8,668
1219	Grand Total:			127,052,919		4,511,470		(10,729)	4,500,741

TABLE 12D
Application of Amortization
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
1	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1983	9/30/2033	30,488	9,472	7.150%	7.150%				9,472		
2	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1986	9/30/2033	30,578	21,534	7.150%	7.150%				21,534		
3	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1987	9/30/2033	2,801	2,801	7.150%	7.150%				2,801		
4	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1988	9/30/2033	1,271	1,271	7.150%	7.150%				1,271		
5	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1989	9/30/2033	1,232	1,232	7.150%	7.150%				1,232		
6	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1990	9/30/2033	1,588	1,588	7.150%	7.150%				1,588		
7	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1985	9/30/2035	47,921	47,921	7.150%	7.150%				47,921		
8	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	22	22	7.150%	7.150%				22		
9	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	52	52	7.150%	7.150%				52		
10	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	121	121	7.150%	7.150%				121		
11	2017	Lower Monument	Corps of Engineers	9/30/1996	9/30/2036	264	264	7.150%	7.150%				264		
12	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1987	9/30/2037	72,536	72,536	7.150%	7.150%				72,536		
13	2017	Libby	Corps of Engineers	9/30/1988	9/30/2038	18,043	14,781	7.150%	7.150%				14,781		
14	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1988	9/30/2038	805	805	7.150%	7.150%				805		
15	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1990	9/30/2040	1,557	1,557	7.150%	7.150%				1,557		
16	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	17	17	7.150%	7.150%				17		
17	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	450	450	7.150%	7.150%				450		
18	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	733	733	7.150%	7.150%				733		
19	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1991	9/30/2041	4,411	4,411	7.150%	7.150%				4,411		
20	2017	Ice Harbor	Corps of Engineers	9/30/1996	9/30/2041	371	371	7.150%	7.150%				371		
21	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1993	9/30/2043	71,632	71,632	7.150%	7.150%				71,632		
22	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1994	9/30/2044	5,700	5,700	7.150%	7.150%				5,700		
23	2017	Chief Joseph	Corps of Engineers	9/30/1994	9/30/2044	4,280	4,017	7.150%	7.150%				4,017		
24	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1994	9/30/2044	4,722	4,722	7.150%	7.150%				4,722		
25	2017	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1994	9/30/2044	12,631	12,631	7.150%	7.150%				12,631		
26	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1995	9/30/2045	3,791	3,791	7.150%	7.150%				3,791		
27	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/1995	9/30/2045	43,343	39,282	7.150%	7.150%				39,282		
28	2017	Detroit Lake/Big Cliff	Corps of Engineers	9/30/1995	9/30/2045	38	38	7.150%	7.150%				38		
29	2017	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	80	39	7.150%	7.150%				39		
30	2017	Lost Creek	Corps of Engineers	9/30/1995	9/30/2045	94	94	7.150%	7.150%				94		
31	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	41	41	7.150%	7.150%				41		
32	2017	McNary	Corps of Engineers	9/30/1995	9/30/2045	16	16	7.150%	7.150%				16		
33	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	443	443	7.150%	7.150%				443		
34	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	147	147	7.150%	7.150%				147		
35	2017	Dworshak	Corps of Engineers	9/30/1995	9/30/2045	1,162	1,162	7.150%	7.150%				1,162		
36	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	37	37	7.150%	7.150%				37		
37	2017	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	33	33	7.150%	7.150%				33		
38	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	99	99	7.150%	7.150%				99		
39	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	531	531	7.150%	7.150%				531		
40	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	562	562	7.150%	7.150%				562		
41	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	624	624	7.150%	7.150%				624		
42	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	1,105	1,105	7.150%	7.150%				1,105		
43	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	243	243	7.150%	7.150%				243		
44	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	712	712	7.150%	7.150%				712		
45	2017	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	287	287	7.150%	7.150%				287		
46	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1995	9/30/2045	6,190	6,190	7.150%	7.150%				6,190		
47	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	1,122	1,122	7.150%	7.150%				1,122		
48	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	410	410	7.150%	7.150%				410		
49	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	784	784	7.150%	7.150%				784		
50	2017	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	2,511	2,453	7.150%	7.150%				2,453		
51	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	440	440	7.150%	7.150%				440		
52	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	608	608	7.150%	7.150%				608		
53	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	7,653	7,653	7.150%	7.150%				7,653		
54	2017	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	442	442	7.150%	7.150%				442		
55	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1996	9/30/2046	376	376	7.150%	7.150%				376		
56	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18		
57	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3		
58	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/1996	9/30/2046	2,431	2,431	7.150%	7.150%				2,431		
59	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3		
60	2017	Green Peter/Foster	Corps of Engineers	9/30/1996	9/30/2046	26	26	7.150%	7.150%				26		

TABLE 12D
Application of Amortization
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	
61	2017	Hills Creek	Corps of Engineers	9/30/1996	9/30/2046	28	28	7.150%	7.150%				28			
62	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	15	15	7.150%	7.150%				15			
63	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10			
64	2017	Lost Creek	Corps of Engineers	9/30/1996	9/30/2046	24	24	7.150%	7.150%				24			
65	2017	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	9	9	7.150%	7.150%				9			
66	2017	Lower Monument	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10			
67	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1996	9/30/2046	12,085	12,085	7.150%	7.150%				12,085			
68	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18			
69	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4			
70	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4			
71	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	2	2	7.150%	7.150%				2			
72	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10			
73	2017	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	656	656	7.150%	7.150%				656			
74	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	211	211	7.150%	7.150%				211			
75	2017	The Dalles	Corps of Engineers	9/30/1996	9/30/2046	1,991	1,991	7.150%	7.150%				1,991			
76	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	80	80	7.150%	7.150%				80			
77	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	355	355	7.150%	7.150%				355			
78	2017	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	426	426	7.150%	7.150%				426			
79	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	241	241	7.150%	7.150%				241			
80	2017	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	625	625	7.150%	7.150%				625			
81	2017	McNary	Corps of Engineers	9/30/1996	9/30/2046	619	619	7.150%	7.150%				619			
82	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	109	109	7.150%	7.150%				109			
83	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	729	729	7.150%	7.150%				729			
84	2017	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	368	368	7.150%	7.150%				368			
85	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	46	46	7.150%	7.150%				46			
86	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	520	520	7.150%	7.150%				520			
87	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	142	142	7.150%	7.150%				142			
88	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	3,909	3,909	7.150%	7.150%				3,909			
89	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	223	223	7.150%	7.150%				223			
90	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	751	751	7.150%	7.150%				751			
91	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	1,322	1,322	7.150%	7.150%				1,322			
92	2017	Albeni Falls	Corps of Engineers	9/30/1997	9/30/2047	431	431	7.150%	7.150%				431			
93	2017	Columbia Basin	Bureau of Reclamation	9/30/1997	9/30/2047	3,393	3,393	7.150%	7.150%				3,393			
94	2017	Cougar	Corps of Engineers	9/30/1997	9/30/2047	26	26	7.150%	7.150%				26			
95	2017	Dworshak	Corps of Engineers	9/30/1997	9/30/2047	7,588	7,588	7.150%	7.150%				7,588			
96	2017	Little Goose	Corps of Engineers	9/30/1997	9/30/2047	1	1	7.150%	7.150%				1			
97	2017	Lower Granite	Corps of Engineers	9/30/1997	9/30/2047	677	677	7.150%	7.150%				677			
98	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1997	9/30/2047	2,173	2,173	7.150%	7.150%				2,173			
99	2017	Boise	Bureau of Reclamation	9/30/1997	9/30/2047	2,266	2,266	7.150%	7.150%				2,266			
100	2017	Chief Joseph	Corps of Engineers	9/30/1997	9/30/2047	657	657	7.150%	7.150%				657			
101	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1997	9/30/2047	111	111	7.150%	7.150%				111			
102	2017	Ice Harbor	Corps of Engineers	9/30/1997	9/30/2047	67	67	7.150%	7.150%				67			
103	2017	John Day	Corps of Engineers	9/30/1997	9/30/2047	179	179	7.150%	7.150%				179			
104	2017	Libby	Corps of Engineers	9/30/1997	9/30/2047	660	660	7.150%	7.150%				660			
105	2017	Mimidoka/Palisades	Bureau of Reclamation	9/30/1997	9/30/2047	50,911	50,911	7.150%	7.150%				50,911			
106	2017	Bonneville Dam	Corps of Engineers	9/30/1997	9/30/2047	161	161	7.150%	7.150%				161			
107	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/2000	9/30/2050	47,006	47,006	6.125%	6.125%				14,055			
108	2017	Hills Creek	Corps of Engineers	9/30/2000	9/30/2050	2,630	2,630	6.125%	6.125%				2,630			
109	2017	Ice Harbor	Corps of Engineers	9/30/2000	9/30/2050	548	548	6.125%	6.125%				548			
110	2017	John Day	Corps of Engineers	9/30/2000	9/30/2050	2,761	2,761	6.125%	6.125%				2,761			
111	2017	Lookout Dam	Corps of Engineers	9/30/2000	9/30/2050	5,098	5,098	6.125%	6.125%				5,098			
112	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2000	9/30/2050	1,529	1,529	6.125%	6.125%				1,529			
113	2017	The Dalles	Corps of Engineers	9/30/2000	9/30/2050	2,588	2,588	6.125%	6.125%				2,588			
114		FY 2017 Subtotal:	-	-	-	547,635	509,890						476,940			
115	2018	Construction (AS)	-	6/30/2013	6/30/2017	3,000	3,000	1.271%	0.750%	Global	6/30/2017	6/30/2018	0.750%	3,000		
116	2018	Construction (AS)	-	8/31/2013	8/31/2017	2,000	2,000	1.494%	0.750%	Global	8/31/2017	8/31/2018	0.750%	2,000		
117	2018	Construction (AS)	-	9/30/2015	9/30/2017	7,700	7,700	0.744%	0.750%	Global	9/30/2017	9/30/2018	0.750%	7,700		
118	2018	Construction (AS)	-	4/30/2017	1/31/2018	2,450	2,450	1.051%	1.051%					2,450		
119	2018	Conservation	-	1/31/2013	1/31/2018	9,000	9,000	1.107%	1.107%				9,000			
120	2018	Conservation	-	4/30/2017	1/31/2018	20,000	20,000	1.051%	1.051%				20,000			

TABLE 12D
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
121	2018	Bonneville Dam	Corps of Engineers	9/30/2000	9/30/2050	24,446	24,446	6.125%	6.125%				24,446		
122	2018	Columbia River Fish Mitigation	Corps of Engineers	9/30/2000	9/30/2050	47,006	32,951	6.125%	6.125%				32,951		
123	2018	Columbia River Fish Mitigation	Corps of Engineers	9/30/2001	9/30/2051	6,168	6,168	5.875%	5.875%				3,315		
124	2018	Green Peter/Foster	Corps of Engineers	9/30/2001	9/30/2051	200	200	5.875%	5.875%				200		
125	2018	Hills Creek	Corps of Engineers	9/30/2001	9/30/2051	8	8	5.875%	5.875%				8		
126	2018	Hungry Horse Dam	Bureau of Reclamation	9/30/2001	9/30/2051	552	552	5.875%	5.875%				552		
127	2018	Ice Harbor	Corps of Engineers	9/30/2001	9/30/2051	764	764	5.875%	5.875%				764		
128	2018	John Day	Corps of Engineers	9/30/2001	9/30/2051	619	619	5.875%	5.875%				619		
129	2018	Libby	Corps of Engineers	9/30/2001	9/30/2051	5,562	5,562	5.875%	5.875%				5,562		
130	2018	Little Goose	Corps of Engineers	9/30/2001	9/30/2051	4,608	4,608	5.875%	5.875%				4,608		
131	2018	Lost Creek	Corps of Engineers	9/30/2001	9/30/2051	147	147	5.875%	5.875%				147		
132	2018	Lower Granite	Corps of Engineers	9/30/2001	9/30/2051	2,025	2,025	5.875%	5.875%				2,025		
133	2018	Lower Monument	Corps of Engineers	9/30/2001	9/30/2051	3,301	3,301	5.875%	5.875%				3,301		
134	2018	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2001	9/30/2051	325	325	5.875%	5.875%				325		
135	2018	McNary	Corps of Engineers	9/30/2001	9/30/2051	1,046	1,046	5.875%	5.875%				1,046		
136	2018	Mimidoka/Palisades	Bureau of Reclamation	9/30/2001	9/30/2051	42	42	5.875%	5.875%				42		
137	2018	RRP - Green Springs	Bureau of Reclamation	9/30/2001	9/30/2051	11,145	11,145	5.875%	5.875%				11,145		
138	2018	Yakima Roza	Bureau of Reclamation	9/30/2001	9/30/2051	15	14	5.875%	5.875%				14		
139		FY 2018 Subtotal:	-	-	-	152,129	138,073						135,220		
140	2019	Bureau Direct	-	10/31/2009	10/31/2018	24,000	24,000	3.719%	3.719%				24,000		
141	2019	Construction (AS)	-	11/30/2012	11/30/2018	5,250	5,250	1.109%	1.109%				5,250		
142	2019	Fish and Wildlife	-	12/31/2009	12/31/2018	26,000	26,000	4.069%	4.069%				26,000		
143	2019	Bureau Direct	-	1/16/2014	12/31/2018	43,000	43,000	1.943%	1.943%				43,000		
144	2019	Bureau Direct	-	1/16/2014	12/31/2018	38,000	38,000	1.943%	1.943%				38,000		
145	2019	Fish and Wildlife	-	8/31/2010	8/31/2019	20,000	20,000	2.646%	2.646%				20,000		
146	2019	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	69,226	5.875%	5.875%				14,236		
147	2019	Columbia River Fish Mitigation	Corps of Engineers	9/30/2001	9/30/2051	6,168	2,853	5.875%	5.875%				2,853		
148	2019	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2001	9/30/2051	282	282	5.875%	5.875%				282		
149		FY 2019 Subtotal:	-	-	-	231,926	228,611						173,622		
150	2020	Construction (AS)	-	10/31/2013	10/31/2019	4,200	4,200	2.039%	2.039%				4,200		
151	2020	Construction (AS)	-	10/31/2013	10/31/2019	5,000	5,000	2.039%	2.039%				5,000		
152	2020	Bureau Direct	-	10/31/2009	10/31/2019	20,000	20,000	3.842%	3.842%				20,000		
153	2020	Bureau Direct	-	11/30/2009	11/30/2019	7,000	7,000	3.637%	3.637%				7,000		
154	2020	Bureau Direct	-	12/31/2009	12/31/2019	13,000	13,000	4.194%	4.194%				13,000		
155	2020	Construction (AS)	-	1/31/2014	1/31/2020	1,750	1,750	2.183%	2.183%				1,750		
156	2020	Construction (AS)	-	1/31/2014	1/31/2020	2,000	2,000	2.183%	2.183%				2,000		
157	2020	Construction (AS)	-	4/30/2014	3/31/2020	1,400	1,400	0.947%	0.947%				1,400		
158	2020	Construction (AS)	-	4/30/2014	3/31/2020	2,000	2,000	0.947%	0.947%				2,000		
159	2020	Bureau Direct	-	3/31/2010	3/31/2020	30,000	30,000	4.083%	4.083%				30,000		
160	2020	Bureau Direct	-	4/30/2010	4/30/2020	18,000	18,000	3.973%	3.973%				18,000		
161	2020	Construction (AS)	-	5/31/2014	4/30/2020	700	700	0.526%	0.526%				700		
162	2020	Bureau Direct	-	5/31/2010	5/31/2020	15,000	15,000	3.574%	3.574%				15,000		
163	2020	Bureau Direct	-	7/31/2010	7/31/2020	17,000	17,000	3.118%	3.118%				17,000		
164	2020	Construction (AS)	-	7/31/2014	7/31/2020	1,050	1,050	0.674%	0.674%				1,050		
165	2020	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	54,989	5.875%	5.875%				6,543		
166		FY 2020 Subtotal:	-	-	-	207,326	193,089						144,643		
167	2021	Construction (AS)	-	11/30/2014	11/30/2020	2,100	2,100	1.809%	1.809%				2,100		
168	2021	Construction (AS)	-	12/31/2014	12/31/2020	1,050	1,050	1.922%	1.922%				1,050		
169	2021	Technology (G)	-	1/31/2015	1/31/2021	35,000	35,000	1.469%	1.469%				35,000		
170	2021	Bureau Direct	-	1/31/2009	1/31/2021	25,000	25,000	3.999%	3.999%				25,000		
171	2021	Construction (AS)	-	2/28/2015	2/28/2021	1,750	1,750	1.761%	1.761%				1,750		
172	2021	Construction (AS)	-	5/31/2015	5/31/2021	2,100	2,100	1.898%	1.898%				2,100		
173	2021	Conservation	-	5/31/2015	5/31/2021	5,000	5,000	1.898%	1.898%				5,000		
174	2021	Conservation	-	7/31/2015	7/31/2021	14,000	14,000	2.067%	2.067%				14,000		
175	2021	Bureau Direct	-	11/20/2013	9/30/2021	50,000	50,000	2.812%	2.812%				50,000		
176	2021	Bureau Direct	-	9/30/2010	9/30/2021	22,000	22,000	2.883%	2.883%				22,000		
177	2021	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	48,446	5.875%	5.875%				2,140		
178		FY 2021 Subtotal:	-	-	-	227,226	206,446						160,140		
179	2022	Construction (AS)	-	10/31/2015	10/31/2021	2,800	2,800	1.942%	1.942%				2,800		
180	2022	Conservation	-	12/31/2013	12/31/2021	6,000	6,000	3.142%	3.142%				6,000		

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
181	2022	Construction (AS)	-	2/29/2016	2/28/2022	3,000	3,000	0.697%	0.697%				3,000		
182	2022	Technology (G)	-	10/31/2015	7/31/2022	6,000	6,000	0.674%	0.674%				6,000		
183	2022	Conservation	-	8/31/2015	8/31/2022	6,000	6,000	2.233%	2.233%				6,000		
184	2022	Bureau Direct	-	11/20/2013	9/30/2022	19,000	19,000	3.125%	3.125%				19,000		
185	2022	Fish and Wildlife	-	11/20/2013	9/30/2022	31,000	31,000	3.125%	3.125%				31,000		
186	2022	Conservation	-	9/30/2015	9/30/2022	4,000	4,000	2.062%	2.062%				4,000		
187	2022	Technology (G)	-	9/30/2017	9/30/2022	8,000	8,000	1.400%	1.400%				8,000		
188	2022	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	46,306	5.875%	5.875%				37,701		
189		FY 2022 Subtotal:	-	-	-	155,026	132,106						123,501		
190	2023	Conservation	-	1/31/2011	1/31/2023	40,000	40,000	4.046%	4.046%				40,000		
191	2023	Conservation	-	4/30/2011	4/30/2023	35,000	35,000	3.932%	3.932%				35,000		
192	2023	Conservation	-	8/12/2011	8/31/2023	40,000	40,000	3.206%	3.206%				40,000		
193	2023	Conservation	-	11/20/2013	9/30/2023	27,000	27,000	3.375%	3.375%				27,000		
194	2023	Technology (G)	-	9/30/2018	9/30/2023	5,000	5,000	2.440%	2.440%				5,000		
195	2023	Construction (AS)	-	9/30/2017	9/30/2023	3,150	3,150	1.510%	1.510%				3,150		
196		FY 2023 Subtotal:	-	-	-	150,150	150,150						150,150		
197	2024	Conservation	-	12/31/2013	12/31/2023	55,000	55,000	0.732%	0.732%				55,000		
198	2024	Conservation	-	12/31/2014	12/31/2023	7,000	7,000	2.403%	2.403%				7,000		
199	2024	Conservation	-	1/31/2015	1/31/2024	7,000	7,000	1.908%	1.908%				7,000		
200	2024	Fish and Wildlife	-	1/31/2015	1/31/2024	5,000	5,000	1.908%	1.908%				5,000		
201	2024	Conservation	-	2/28/2015	2/29/2024	8,000	8,000	2.251%	2.251%				8,000		
202	2024	Technology (G)	-	9/30/2019	3/31/2024	5,000	5,000	3.160%	3.160%				5,000		
203	2024	Conservation	-	4/30/2015	4/30/2024	5,000	5,000	2.269%	2.269%				5,000		
204	2024	Conservation	-	5/31/2014	4/30/2024	15,000	15,000	0.526%	0.526%				15,000		
205	2024	Fish and Wildlife	-	6/30/2009	6/30/2024	20,000	20,000	4.556%	4.556%				20,000		
206	2024	Construction (AS)	-	9/30/2018	9/30/2024	5,670	5,600	2.560%	2.560%				5,600		
207	2024	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	8,605	5.875%	5.875%				4,879		
208		FY 2024 Subtotal:	-	-	-	201,896	141,205						137,479		
209	2025	Conservation	-	6/30/2014	10/31/2024	5,000	5,000	0.526%	0.526%				5,000		
210	2025	Conservation	-	10/31/2014	12/31/2024	10,000	10,000	0.732%	0.732%				10,000		
211	2025	Conservation	-	3/31/2015	3/31/2025	5,000	5,000	2.295%	2.295%				5,000		
212	2025	Conservation	-	5/31/2014	4/30/2025	3,000	3,000	0.526%	0.526%				3,000		
213	2025	Conservation	-	4/30/2014	6/30/2025	30,000	30,000	0.732%	0.732%				30,000		
214	2025	Conservation	-	7/31/2014	7/31/2025	12,000	12,000	0.674%	0.674%				12,000		
215	2025	Conservation	-	8/31/2014	9/30/2025	4,000	4,000	0.947%	0.947%				4,000		
216	2025	Construction (AS)	-	9/30/2019	9/30/2025	5,670	5,950	3.270%	3.270%				5,950		
217	2025	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	5,516	5.375%	5.375%				3,620		
218	2025	John Day	Corps of Engineers	9/30/1999	9/30/2049	3,510	3,510	5.375%	5.375%				3,510		
219	2025	Lower Granite	Corps of Engineers	9/30/1999	9/30/2049	856	856	5.375%	5.375%				856		
220	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1999	9/30/2049	7	7	5.375%	5.375%				7		
221	2025	Bonneville Dam	Corps of Engineers	9/30/2001	9/30/2051	2,530	2,530	5.875%	5.875%				2,530		
222	2025	Chief Joseph	Corps of Engineers	9/30/2001	9/30/2051	345	345	5.875%	5.875%				345		
223	2025	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	3,727	5.875%	5.875%				3,727		
224	2025	Bonneville Dam	Corps of Engineers	9/30/2002	9/30/2052	448	448	5.500%	5.500%				448		
225	2025	Chief Joseph	Corps of Engineers	9/30/2002	9/30/2052	2	2	5.500%	5.500%				2		
226	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/2002	9/30/2052	8,797	8,797	5.500%	5.500%				8,797		
227	2025	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2002	9/30/2052	18	18	5.500%	5.500%				18		
228	2025	Dworshak	Corps of Engineers	9/30/2002	9/30/2052	199	199	5.500%	5.500%				199		
229	2025	Hills Creek	Corps of Engineers	9/30/2002	9/30/2052	2	2	5.500%	5.500%				2		
230	2025	Ice Harbor	Corps of Engineers	9/30/2002	9/30/2052	1,014	1,014	5.500%	5.500%				1,014		
231	2025	Little Goose	Corps of Engineers	9/30/2002	9/30/2052	27	27	5.500%	5.500%				27		
232	2025	Lower Granite	Corps of Engineers	9/30/2002	9/30/2052	1,275	1,275	5.500%	5.500%				1,275		
233	2025	Lower Monument	Corps of Engineers	9/30/2002	9/30/2052	29	29	5.500%	5.500%				29		
234	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2002	9/30/2052	890	890	5.500%	5.500%				890		
235	2025	The Dalles	Corps of Engineers	9/30/2002	9/30/2052	1,226	1,226	5.500%	5.500%				1,226		
236		FY 2025 Subtotal:	-	-	-	170,585	105,366						103,470		
237	2026	Conservation	-	10/31/2013	10/31/2025	34,000	34,000	3.568%	3.568%				34,000		
238	2026	Conservation	-	1/31/2014	1/31/2026	5,000	5,000	3.621%	3.621%				5,000		
239	2026	Fish and Wildlife	-	1/31/2011	1/31/2026	50,000	50,000	4.440%	4.440%				50,000		
240	2026	Fish and Wildlife	-	2/28/2011	2/28/2026	15,000	15,000	4.398%	4.398%				15,000		

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	
241	2026	Fish and Wildlife	-	6/22/2011	6/30/2026	15,000	15,000	4.205%	4.205%				15,000			
242	2026	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	1,896	5.375%	5.375%				990			
243		FY 2026 Subtotal:	-	-	-	124,516	120,896						119,990			
244	2027	Fish and Wildlife	-	10/31/2013	12/31/2026	28,000	28,000	3.717%	3.717%				28,000			
245	2027	Conservation	-	11/30/2014	3/31/2027	6,000	6,000	0.947%	0.947%				6,000			
246	2027	Fish and Wildlife	-	5/31/2014	4/30/2027	11,000	11,000	0.526%	0.526%				11,000			
247	2027	Fish and Wildlife	-	11/30/2013	5/31/2027	5,000	5,000	0.713%	0.713%				5,000			
248	2027	Fish and Wildlife	-	10/31/2013	5/31/2027	11,000	11,000	3.762%	3.762%				11,000			
249	2027	Bonneville Dam	Corps of Engineers	9/30/1999	9/30/2049	19,368	19,368	5.375%	5.375%				19,368			
250	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/1999	9/30/2049	14,115	14,115	5.375%	5.375%				14,115			
251	2027	Dworshak	Corps of Engineers	9/30/1999	9/30/2049	630	630	5.375%	5.375%				630			
252	2027	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	906	5.375%	5.375%				906			
253	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	60,581	5.375%	5.375%				6,627			
254	2027	Ice Harbor	Corps of Engineers	9/30/2004	9/30/2054	3,321	3,321	5.375%	5.375%				3,321			
255	2027	John Day	Corps of Engineers	9/30/2004	9/30/2054	2,830	2,830	5.375%	5.375%				2,830			
256	2027	Little Goose	Corps of Engineers	9/30/2004	9/30/2054	68	67	5.375%	5.375%				67			
257	2027	Lower Monument	Corps of Engineers	9/30/2004	9/30/2054	3,423	3,423	5.375%	5.375%				3,423			
258	2027	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2004	9/30/2054	230	230	5.375%	5.375%				230			
259	2027	McNary	Corps of Engineers	9/30/2004	9/30/2054	6,138	6,138	5.375%	5.375%				6,138			
260	2027	The Dalles	Corps of Engineers	9/30/2004	9/30/2054	182	182	5.375%	5.375%				182			
261		FY 2027 Subtotal:	-	-	-	177,399	172,789						118,835			
262	2028	Bureau Direct	-	4/30/2009	4/30/2023	25,000	25,000	4.391%	3.642%	Global	4/30/2023	4/30/2028	3.642%	25,000		
263	2028	Fish and Wildlife	-	11/20/2013	9/30/2023	23,000	23,000	3.375%	3.642%	Global	9/30/2023	9/30/2028	3.642%	23,000		
264	2028	Conservation	-	10/31/2015	10/31/2027	25,000	25,000	0.732%	0.732%				25,000			
265	2028	Fish and Wildlife	-	3/31/2015	3/31/2028	3,000	3,000	2.511%	2.511%				3,000			
266	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	53,953	5.375%	5.375%				4,624			
267		FY 2028 Subtotal:	-	-	-	136,581	129,953						80,624			
268	2029	Bureau Direct	-	1/16/2014	12/31/2018	26,000	26,000	1.943%	3.705%	Global	12/31/2018	12/31/2028	3.705%	26,000		
269	2029	Bureau Direct	-	1/16/2014	12/31/2018	21,000	21,000	1.943%	3.705%	Global	12/31/2018	12/31/2028	3.705%	21,000		
270	2029	Bureau Direct	-	1/16/2014	12/31/2018	14,000	14,000	1.943%	3.705%	Global	12/31/2018	12/31/2028	3.705%	14,000		
271	2029	Bureau Direct	-	1/31/2010	1/31/2019	10,000	10,000	3.714%	3.705%	Global	1/31/2019	1/31/2029	3.705%	10,000		
272	2029	Bureau Direct	-	9/30/2009	9/30/2019	25,000	25,000	3.699%	3.705%	Global	9/30/2019	9/30/2029	3.705%	25,000		
273	2029	Fish and Wildlife	-	10/31/2013	10/31/2028	22,000	22,000	3.880%	3.880%				22,000			
274	2029	Fish and Wildlife	-	1/31/2014	1/31/2029	7,000	7,000	3.896%	3.896%				7,000			
275	2029	Fish and Wildlife	-	10/31/2014	1/31/2029	15,000	15,000	0.674%	0.674%				15,000			
276	2029	Fish and Wildlife	-	4/30/2014	2/28/2029	7,000	7,000	0.697%	0.697%				7,000			
277	2029	Fish and Wildlife	-	8/31/2014	7/31/2029	5,000	5,000	0.674%	0.674%				5,000			
278	2029	Bureau Direct	-	6/30/2009	6/30/2039	25,000	25,000	5.192%	5.192%				25,000	2,308		
279	2029	Bonneville Dam	Corps of Engineers	9/30/2003	9/30/2053	4,581	4,581	5.125%	5.125%				4,581			
280	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2003	9/30/2053	68,440	68,440	5.125%	5.125%				68,440			
281	2029	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2003	9/30/2053	223	223	5.125%	5.125%				223			
282	2029	Dworshak	Corps of Engineers	9/30/2003	9/30/2053	761	761	5.125%	5.125%				761			
283	2029	Ice Harbor	Corps of Engineers	9/30/2003	9/30/2053	50	50	5.125%	5.125%				50			
284	2029	Little Goose	Corps of Engineers	9/30/2003	9/30/2053	146	146	5.125%	5.125%				146			
285	2029	Lookout Dam	Corps of Engineers	9/30/2003	9/30/2053	135	135	5.125%	5.125%				135			
286	2029	Lower Granite	Corps of Engineers	9/30/2003	9/30/2053	42	42	5.125%	5.125%				42			
287	2029	Lower Monument	Corps of Engineers	9/30/2003	9/30/2053	22	22	5.125%	5.125%				22			
288	2029	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2003	9/30/2053	98	98	5.125%	5.125%				98			
289	2029	McNary	Corps of Engineers	9/30/2003	9/30/2053	97	97	5.125%	5.125%				97			
290	2029	Chief Joseph	Corps of Engineers	9/30/2003	9/30/2053	992	992	5.125%	5.125%				992			
291	2029	Bonneville Dam	Corps of Engineers	9/30/2004	9/30/2054	26,741	26,741	5.375%	5.375%				26,741			
292	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	49,329	5.375%	5.375%				49,329			
293	2029	Cougar	Corps of Engineers	9/30/2004	9/30/2054	3,622	3,622	5.375%	5.375%				3,622			
294	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2005	9/30/2055	52,039	52,039	5.125%	5.125%				25,691			
295	2029	Hills Creek	Corps of Engineers	9/30/2005	9/30/2055	46	46	5.125%	5.125%				46			
296	2029	Hungry Horse Dam	Bureau of Reclamation	9/30/2005	9/30/2055	2,951	2,951	5.125%	5.125%				2,951			
297	2029	John Day	Corps of Engineers	9/30/2005	9/30/2055	2,828	2,827	5.125%	5.125%				2,827			
298	2029	Lookout Dam	Corps of Engineers	9/30/2005	9/30/2055	7,355	7,355	5.125%	5.125%				7,355			
299	2029	Lower Granite	Corps of Engineers	9/30/2005	9/30/2055	393	393	5.125%	5.125%				393			
300	2029	Lower Monument	Corps of Engineers	9/30/2005	9/30/2055	527	527	5.125%	5.125%				527			
301	2029	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2005	9/30/2055	4	4	5.125%	5.125%				4			

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
302	2029	McNary	Corps of Engineers	9/30/2005	9/30/2055	550	550	5.125%	5.125%				550		
303	2029	The Dalles	Corps of Engineers	9/30/2005	9/30/2055	36,019	36,019	5.125%	5.125%				36,019		
304	2029	Yakima Chandler/Kennewick	Bureau of Reclamation	9/30/2005	9/30/2055	833	833	5.125%	5.125%				833		
305		FY 2029 Subtotal:	-	-	-	447,073	435,822						409,474	2,308	
306	2030	Bureau Direct	-	6/30/2010	6/30/2020	10,000	10,000	3.243%	4.057%	Global	6/30/2020	6/30/2030	4.057%	10,000	
307	2030	Bureau Direct	-	6/30/2010	6/30/2020	30,000	30,000	3.243%	4.057%	Global	6/30/2020	6/30/2030	4.057%	30,000	
308	2030	Bureau Direct	-	11/20/2013	9/30/2020	51,000	51,000	2.473%	4.057%	Global	9/30/2020	9/30/2030	4.057%	51,000	
309	2030	Fish and Wildlife	-	11/30/2014	3/31/2030	8,000	8,000	0.947%	0.947%				8,000		
310	2030	Corps	-	5/31/2016	5/31/2030	15,000	15,000	2.599%	2.599%				15,000		
311	2030	Bureau Direct	-	7/31/2016	7/31/2030	12,000	12,000	2.145%	2.145%				12,000		
312	2030	Bureau Direct	-	7/31/2016	7/31/2030	25,000	25,000	2.145%	2.145%				25,000		
313	2030	Bureau Direct	-	1/31/2011	1/31/2039	35,000	35,000	5.040%	5.040%				35,000	2,705	
314	2030	Bureau Direct	-	2/28/2011	2/28/2040	50,000	50,000	4.995%	4.995%				25,484	1,821	
315	2030	Albeni Falls	Corps of Engineers	9/30/2005	9/30/2055	481	481	5.125%	5.125%				481		
316	2030	Boise	Bureau of Reclamation	9/30/2005	9/30/2055	903	903	5.125%	5.125%				903		
317	2030	Bonneville Dam	Corps of Engineers	9/30/2005	9/30/2055	19,725	19,725	5.125%	5.125%				19,725		
318	2030	Columbia Basin	Bureau of Reclamation	9/30/2005	9/30/2055	10,963	10,963	5.125%	5.125%				10,963		
319	2030	Columbia River Fish Mitigation	Corps of Engineers	9/30/2005	9/30/2055	52,039	26,348	5.125%	5.125%				26,348		
320	2030	Cougar	Corps of Engineers	9/30/2005	9/30/2055	8,130	8,130	5.125%	5.125%				8,130		
321	2030	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2005	9/30/2055	1,031	1,031	5.125%	5.125%				1,031		
322	2030	Dworshak	Corps of Engineers	9/30/2005	9/30/2055	713	713	5.125%	5.125%				713		
323	2030	Boise	Bureau of Reclamation	9/30/2007	9/30/2057	76	76	5.000%	5.000%				76		
324	2030	Bonneville Dam	Corps of Engineers	9/30/2007	9/30/2057	1,124	1,124	5.000%	5.000%				1,124		
325	2030	Columbia Basin	Bureau of Reclamation	9/30/2007	9/30/2057	929	929	5.000%	5.000%				929		
326	2030	Columbia River Fish Mitigation	Corps of Engineers	9/30/2007	9/30/2057	53,525	53,525	5.000%	5.000%				53,525		
327	2030	Cougar	Corps of Engineers	9/30/2007	9/30/2057	120	120	5.000%	5.000%				120		
328	2030	Hungry Horse Dam	Bureau of Reclamation	9/30/2007	9/30/2057	294	294	5.000%	5.000%				294		
329	2030	John Day	Corps of Engineers	9/30/2007	9/30/2057	233	233	5.000%	5.000%				233		
330	2030	Lookout Dam	Corps of Engineers	9/30/2007	9/30/2057	572	572	5.000%	5.000%				572		
331	2030	The Dalles	Corps of Engineers	9/30/2007	9/30/2057	140	140	5.000%	5.000%				140		
332		FY 2030 Subtotal:	-	-	-	386,997	361,306						336,790	4,526	
333	2031	Fish and Wildlife	-	2/29/2016	2/28/2031	4,000	4,000	0.697%	0.697%				4,000		
334	2031	Fish and Wildlife	-	10/31/2015	2/28/2031	4,000	4,000	0.697%	0.697%				4,000		
335	2031	Fish and Wildlife	-	10/31/2015	3/31/2031	5,000	5,000	0.947%	0.947%				5,000		
336	2031	Corps	-	4/30/2016	4/30/2031	53,000	53,000	2.661%	2.661%				53,000		
337	2031	Bureau Direct	-	4/30/2016	4/30/2031	17,000	17,000	2.661%	2.661%				17,000		
338	2031	Bureau Direct	-	6/22/2011	6/30/2036	30,000	30,000	4.629%	4.629%				30,000	1,470	
339	2031	Bureau Direct	-	6/22/2011	6/30/2038	30,000	30,000	4.700%	4.700%				30,000	1,699	
340	2031	Bureau Direct	-	2/28/2011	2/28/2040	50,000	24,516	4.995%	4.995%				24,516	1,786	
341	2031	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	366,395	4.500%	4.500%				191,054		
342	2031	John Day	Corps of Engineers	9/30/2006	9/30/2056	601	601	4.500%	4.500%				601		
343	2031	Lower Monument	Corps of Engineers	9/30/2006	9/30/2056	285	285	4.500%	4.500%				285		
344	2031	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2006	9/30/2056	379	379	4.500%	4.500%				379		
345	2031	The Dalles	Corps of Engineers	9/30/2006	9/30/2056	2,030	2,030	4.500%	4.500%				2,030		
346	2031	McNary	Corps of Engineers	9/30/2006	9/30/2056	4,080	4,080	4.500%	4.500%				4,080		
347		FY 2031 Subtotal:	-	-	-	566,769	541,285						365,945	4,955	
348	2032	Bureau Direct	-	9/30/2014	5/31/2032	16,000	16,000	0.713%	0.713%				16,000		
349	2032	Bureau Direct	-	9/30/2014	5/31/2032	10,000	10,000	0.713%	0.713%				10,000		
350	2032	Bureau Direct	-	7/31/2017	7/31/2032	13,000	13,000	2.180%	2.180%				13,000		
351	2032	Corps	-	7/31/2017	7/31/2032	54,000	26,796	2.180%	2.180%				26,796		
352	2032	Bureau Direct	-	8/31/2017	8/31/2032	13,000	13,000	2.180%	2.180%				13,000		
353	2032	Corps	-	8/31/2017	8/31/2032	54,000	26,796	2.180%	2.180%				26,796		
354	2032	Bureau Direct	-	9/30/2017	9/30/2032	14,000	14,000	2.180%	2.180%				14,000		
355	2032	Corps	-	9/30/2017	9/30/2032	55,000	27,796	2.180%	2.180%				27,796		
356	2032	Fish and Wildlife	-	9/30/2017	9/30/2032	40,000	40,000	2.180%	2.180%				40,000		
357	2032	Boise	Bureau of Reclamation	9/30/2006	9/30/2056	15	15	4.500%	4.500%				15		
358	2032	Bonneville Dam	Corps of Engineers	9/30/2006	9/30/2056	2,628	2,628	4.500%	4.500%				2,628		
359	2032	Columbia Basin	Bureau of Reclamation	9/30/2006	9/30/2056	1,987	1,987	4.500%	4.500%				1,987		
360	2032	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	175,340	4.500%	4.500%				175,340		

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
361	2032	Cougar	Corps of Engineers	9/30/2006	9/30/2056	109	109	4.500%	4.500%				109		
362	2032	Dworshak	Corps of Engineers	9/30/2006	9/30/2056	73	73	4.500%	4.500%				73		
363	2032	Boise	Bureau of Reclamation	9/30/2009	9/30/2059	2	2	4.375%	4.375%				2		
364	2032	Columbia River Fish Mitigation	Corps of Engineers	9/30/2009	9/30/2059	103,203	103,203	4.375%	4.375%				103,203		
365	2032	Cougar	Corps of Engineers	9/30/2009	9/30/2059	121	121	4.375%	4.375%				121		
366	2032	Dworshak	Corps of Engineers	9/30/2009	9/30/2059	2,307	2,307	4.375%	4.375%				2,307		
367	2032	Ice Harbor	Corps of Engineers	9/30/2009	9/30/2059	2,615	2,615	4.375%	4.375%				2,615		
368	2032	Little Goose	Corps of Engineers	9/30/2009	9/30/2059	3,171	3,171	4.375%	4.375%				3,171		
369	2032	Lower Granite	Corps of Engineers	9/30/2009	9/30/2059	5,669	5,669	4.375%	4.375%				5,669		
370	2032	Lower Monument	Corps of Engineers	9/30/2009	9/30/2059	2,332	2,332	4.375%	4.375%				2,332		
371	2032	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2009	9/30/2059	1,540	1,540	4.375%	4.375%				1,540		
372		FY 2032 Subtotal:	-	-	-	761,167	488,501						488,496		
373	2033	Bureau Direct	-	9/30/2014	6/30/2033	11,000	11,000	0.732%	0.732%				11,000		
374	2033	Bureau Direct	-	9/30/2014	6/30/2033	12,000	12,000	0.732%	0.732%				12,000		
375	2033	Bureau Direct	-	9/30/2014	7/31/2033	15,000	15,000	0.674%	0.674%				15,000		
376	2033	Bureau Direct	-	7/31/2018	7/31/2033	28,000	28,000	3.250%	3.250%				28,000		
377	2033	Corps	-	7/31/2018	7/31/2033	53,000	53,000	3.250%	3.250%				53,000		
378	2033	Bureau Direct	-	9/30/2015	9/30/2033	10,000	10,000	3.134%	3.134%				10,000		
379	2033	Corps	-	9/30/2015	9/30/2033	4,000	4,000	3.134%	3.134%				4,000		
380	2033	Fish and Wildlife	-	9/30/2018	9/30/2033	51,000	51,000	3.250%	3.250%				51,000		
381	2033	Bureau Direct	-	10/31/2010	10/31/2034	20,000	20,000	4.211%	4.211%				20,000	265	
382	2033	Corps	-	7/31/2019	7/31/2036	40,000	40,000	3.960%	3.960%				2,591		
383	2033	Bureau Direct	-	8/12/2011	8/31/2037	30,000	30,000	4.208%	4.208%				30,000	833	
384	2033	Bureau Direct	-	8/31/2019	8/31/2037	48,000	48,000	3.990%	3.990%				48,000		
385	2033	Corps	-	8/31/2019	8/31/2037	41,000	41,000	3.990%	3.990%				41,000		
386	2033	Bureau Direct	-	9/30/2019	9/30/2038	48,000	48,000	4.030%	4.030%				48,000		
387	2033	Corps	-	9/30/2019	9/30/2038	41,000	41,000	4.030%	4.030%				41,000		
388	2033	Bonneville Dam	Corps of Engineers	9/30/2009	9/30/2059	2,744	2,744	4.375%	4.375%				2,744		
389	2033	Chief Joseph	Corps of Engineers	9/30/2009	9/30/2059	24,727	24,727	4.375%	4.375%				24,727		
390	2033	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2009	9/30/2059	1,540	5	4.375%	4.375%				5		
391	2033	Little Goose	Corps of Engineers	9/30/2010	9/30/2060	30	30	4.250%	4.250%				30		
392	2033	Lower Granite	Corps of Engineers	9/30/2010	9/30/2060	1,156	1,156	4.250%	4.250%				1,156		
393	2033	Albeni Falls	Corps of Engineers	9/30/2010	9/30/2060	42	42	4.250%	4.250%				42		
394	2033	Bonneville Dam	Corps of Engineers	9/30/2010	9/30/2060	1,425	1,425	4.250%	4.250%				1,425		
395	2033	Columbia Basin	Bureau of Reclamation	9/30/2010	9/30/2060	877	877	4.250%	4.250%				877		
396	2033	Columbia River Fish Mitigation	Corps of Engineers	9/30/2010	9/30/2060	56,832	56,832	4.250%	4.250%				56,832		
397	2033	Cougar	Corps of Engineers	9/30/2010	9/30/2060	59	59	4.250%	4.250%				59		
398	2033	Hungry Horse Dam	Bureau of Reclamation	9/30/2010	9/30/2060	779	779	4.250%	4.250%				779		
399	2033	Ice Harbor	Corps of Engineers	9/30/2010	9/30/2060	207	207	4.250%	4.250%				207		
400	2033	John Day	Corps of Engineers	9/30/2010	9/30/2060	356	356	4.250%	4.250%				356		
401	2033	Libby	Corps of Engineers	9/30/2010	9/30/2060	40	40	4.250%	4.250%				40		
402	2033	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2010	9/30/2060	6	6	4.250%	4.250%				6		
403		FY 2033 Subtotal:	-	-	-	542,819	541,285						503,876	1,098	
404	2034	Bureau Direct	-	2/27/2012	2/28/2034	55,000	55,000	0.697%	0.697%				55,000		
405	2034	Bureau Direct	-	8/31/2018	8/31/2034	28,000	28,000	3.290%	3.290%				28,000		
406	2034	Corps	-	8/31/2018	8/31/2034	53,000	53,000	3.290%	3.290%				53,000		
407	2034	Fish and Wildlife	-	9/30/2019	9/30/2034	44,000	44,000	3.890%	3.890%				44,000		
408	2034	Bureau Direct	-	7/31/2019	7/31/2036	47,000	47,000	3.960%	3.960%				47,000		
409	2034	Corps	-	7/31/2019	7/31/2036	40,000	37,409	3.960%	3.960%				37,409		
410	2034	Hungry Horse Dam	Bureau of Reclamation	9/30/2011	9/30/2061	503	503	3.750%	3.750%				503		
411	2034	Columbia Basin	Bureau of Reclamation	9/30/2011	9/30/2061	1,723	1,723	3.750%	3.750%				1,723		
412	2034	Columbia River Fish Mitigation	Corps of Engineers	9/30/2011	9/30/2061	106,014	106,014	3.750%	3.750%				62,219		
413	2034	Green Peter/Foster	Corps of Engineers	9/30/2011	9/30/2061	87	87	3.750%	3.750%				87		
414	2034	Hills Creek	Corps of Engineers	9/30/2011	9/30/2061	12	12	3.750%	3.750%				12		
415	2034	Ice Harbor	Corps of Engineers	9/30/2011	9/30/2061	819	819	3.750%	3.750%				819		
416	2034	John Day	Corps of Engineers	9/30/2011	9/30/2061	175	175	3.750%	3.750%				175		
417	2034	Libby	Corps of Engineers	9/30/2011	9/30/2061	152	152	3.750%	3.750%				152		
418	2034	Lookout Dam	Corps of Engineers	9/30/2011	9/30/2061	17	17	3.750%	3.750%				17		
419	2034	Lost Creek	Corps of Engineers	9/30/2011	9/30/2061	7	7	3.750%	3.750%				7		
420	2034	Lower Granite	Corps of Engineers	9/30/2011	9/30/2061	8	8	3.750%	3.750%				8		

TABLE 12D
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
421	2034	McNary	Corps of Engineers	9/30/2011	9/30/2061	565	565	3.750%	3.750%				565		
422	2034	Columbia Basin	Bureau of Reclamation	9/30/2014	9/30/2064	18	18	3.875%	3.875%				18		
423	2034	Cougar	Corps of Engineers	9/30/2014	9/30/2064	12	12	3.875%	3.875%				12		
424	2034	Hungry Horse Dam	Bureau of Reclamation	9/30/2014	9/30/2064	12	12	3.875%	3.875%				12		
425	2034	Bonneville Dam	Corps of Engineers	9/30/2014	9/30/2064			3.875%	3.875%				0		
426	2034	Columbia River Fish Mitigation	Corps of Engineers	9/30/2014	9/30/2064	110,071	110,071	3.875%	3.875%				110,071		
427	2034	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2014	9/30/2064	18	18	3.875%	3.875%				18		
428	2034	Green Peter/Foster	Corps of Engineers	9/30/2014	9/30/2064	385	385	3.875%	3.875%				385		
429	2034	Lower Granite	Corps of Engineers	9/30/2014	9/30/2064	2,644	2,644	3.875%	3.875%				2,644		
430	2034	Lower Monument	Corps of Engineers	9/30/2014	9/30/2064	1,430	1,430	3.875%	3.875%				1,430		
431	2034	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2014	9/30/2064	222	222	3.875%	3.875%				222		
432	2034	McNary	Corps of Engineers	9/30/2014	9/30/2064	759	759	3.875%	3.875%				759		
433	2034	Columbia River Fish Mitigation	Corps of Engineers	9/30/2019	9/30/2069	63,746	63,746	3.870%	3.870%				63,746		
434		FY 2034 Subtotal:	-	-	-	556,399	553,807						510,012		
435	2035	Bureau Direct	-	9/30/2018	9/30/2035	29,000	29,000	3.330%	3.330%				29,000		
436	2035	Corps	-	9/30/2018	9/30/2035	53,000	53,000	3.330%	3.330%				53,000		
437	2035	Bonneville Dam	Corps of Engineers	9/30/2011	9/30/2061	10,962	10,962	3.750%	3.750%				10,962		
438	2035	Chief Joseph	Corps of Engineers	9/30/2011	9/30/2061	4	4	3.750%	3.750%				4		
439	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2011	9/30/2061	106,014	43,795	3.750%	3.750%				43,795		
440	2035	Cougar	Corps of Engineers	9/30/2011	9/30/2061	282	282	3.750%	3.750%				282		
441	2035	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2011	9/30/2061	122	122	3.750%	3.750%				122		
442	2035	Cougar	Corps of Engineers	9/30/2012	9/30/2062	139	139	3.375%	3.375%				139		
443	2035	Hungry Horse Dam	Bureau of Reclamation	9/30/2012	9/30/2062	3	3	3.375%	3.375%				3		
444	2035	Minidoka/Palisades	Bureau of Reclamation	9/30/2012	9/30/2062	7	7	3.375%	3.375%				7		
445	2035	Green Peter/Foster	Corps of Engineers	9/30/2012	9/30/2062	28	28	3.375%	3.375%				28		
446	2035	Chief Joseph	Corps of Engineers	9/30/2012	9/30/2062	28	28	3.375%	3.375%				28		
447	2035	Columbia Basin	Bureau of Reclamation	9/30/2012	9/30/2062	11	11	3.375%	3.375%				11		
448	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2012	9/30/2062	101,616	101,616	3.375%	3.375%				101,616		
449	2035	Hills Creek	Corps of Engineers	9/30/2012	9/30/2062	142	142	3.375%	3.375%				142		
450	2035	Ice Harbor	Corps of Engineers	9/30/2012	9/30/2062	115	115	3.375%	3.375%				115		
451	2035	John Day	Corps of Engineers	9/30/2012	9/30/2062	6,161	6,161	3.375%	3.375%				6,161		
452	2035	Libby	Corps of Engineers	9/30/2012	9/30/2062	16	16	3.375%	3.375%				16		
453	2035	Lookout Dam	Corps of Engineers	9/30/2012	9/30/2062	294	294	3.375%	3.375%				294		
454	2035	Lower Monument	Corps of Engineers	9/30/2012	9/30/2062	89	89	3.375%	3.375%				89		
455	2035	McNary	Corps of Engineers	9/30/2012	9/30/2062	12	11	3.375%	3.375%				11		
456	2035	RRP - Green Springs	Bureau of Reclamation	9/30/2012	9/30/2062	2	2	3.375%	3.375%				2		
457	2035	Columbia Basin	Bureau of Reclamation	9/30/2013	9/30/2063	3,083	3,083	2.875%	2.875%				911		
458	2035	RRP - Green Springs	Bureau of Reclamation	9/30/2013	9/30/2063	1	1	2.875%	2.875%				1		
459	2035	Bonneville Dam	Corps of Engineers	9/30/2015	9/30/2065	102	102	3.250%	3.250%				102		
460	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2015	9/30/2065	64,291	64,291	3.250%	3.250%				64,291		
461	2035	Green Peter/Foster	Corps of Engineers	9/30/2015	9/30/2065	68	68	3.250%	3.250%				68		
462	2035	Hungry Horse Dam	Bureau of Reclamation	9/30/2015	9/30/2065			3.250%	3.250%				0		
463	2035	Ice Harbor	Corps of Engineers	9/30/2015	9/30/2065	3,175	3,175	3.250%	3.250%				3,175		
464	2035	John Day	Corps of Engineers	9/30/2015	9/30/2065	163	163	3.250%	3.250%				163		
465	2035	Lower Granite	Corps of Engineers	9/30/2015	9/30/2065	1,597	1,597	3.250%	3.250%				1,597		
466	2035	Minidoka/Palisades	Bureau of Reclamation	9/30/2015	9/30/2065	19,237	19,237	3.250%	3.250%				19,237		
467	2035	The Dalles	Corps of Engineers	9/30/2015	9/30/2065	302	302	3.250%	3.250%				302		
468	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2016	9/30/2066	30,190	30,190	3.000%	3.000%				30,190		
469	2035	Cougar	Corps of Engineers	9/30/2016	9/30/2066	2	2	3.000%	3.000%				2		
470	2035	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2016	9/30/2066	31	31	3.000%	3.000%				31		
471	2035	Green Peter/Foster	Corps of Engineers	9/30/2016	9/30/2066	70	70	3.000%	3.000%				70		
472	2035	Ice Harbor	Corps of Engineers	9/30/2016	9/30/2066	558	558	3.000%	3.000%				558		
473	2035	Lower Granite	Corps of Engineers	9/30/2016	9/30/2066	1,878	1,878	3.000%	3.000%				1,878		
474	2035	Lower Monument	Corps of Engineers	9/30/2016	9/30/2066	155	155	3.000%	3.000%				155		
475	2035	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2016	9/30/2066	1,256	1,256	3.000%	3.000%				1,256		
476	2035	Minidoka/Palisades	Bureau of Reclamation	9/30/2016	9/30/2066	206	206	3.000%	3.000%				206		
477	2035	The Dalles	Corps of Engineers	9/30/2016	9/30/2066	4	4	3.000%	3.000%				4		
478	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2018	9/30/2068	147,186	147,186	3.320%	3.320%				147,186		
479		FY 2035 Subtotal:	-	-	-	581,598	519,379						517,208		

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
480	2036	Bureau Direct	-	6/30/2013	1/31/2039	35,000	35,000	0.674%	0.674%				32,479		2,521
481	2036	Corps	-	2/29/2016	2/28/2045	3,000	3,000	0.697%	0.697%				2,396		604
482	2036	Bonneville Dam	Corps of Engineers	9/30/2013	9/30/2063	268	268	2.875%	2.875%				268		
483	2036	Chief Joseph	Corps of Engineers	9/30/2013	9/30/2063	10	10	2.875%	2.875%				10		
484	2036	Columbia Basin	Bureau of Reclamation	9/30/2013	9/30/2063	3,083	2,171	2.875%	2.875%				2,171		
485	2036	Columbia River Fish Mitigation	Corps of Engineers	9/30/2013	9/30/2063	95,274	95,274	2.875%	2.875%				95,274		
486	2036	Cougar	Corps of Engineers	9/30/2013	9/30/2063	4,088	4,088	2.875%	2.875%				4,088		
487	2036	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2013	9/30/2063	528	528	2.875%	2.875%				528		
488	2036	John Day	Corps of Engineers	9/30/2013	9/30/2063	17	17	2.875%	2.875%				17		
489	2036	Little Goose	Corps of Engineers	9/30/2013	9/30/2063	66	66	2.875%	2.875%				66		
490	2036	McNary	Corps of Engineers	9/30/2013	9/30/2063	1,000	1,000	2.875%	2.875%				1,000		
491	2036	Replacements	-	3/31/2020	3/31/2065	218,435	218,435	4.430%	4.430%				218,435		
492	2036	Replacements	-	3/31/2021	3/31/2066	218,435	218,435	4.430%	4.430%				120,316		
493	2036	Columbia River Fish Mitigation	Corps of Engineers	9/30/2017	9/30/2067	63,629	63,629	2.380%	2.380%				63,629		
494		FY 2036 Subtotal:	-	-	-	642,834	641,923						540,678		3,125
495	2037	Replacements	-	3/31/2021	3/31/2066	218,435	98,120	4.430%	4.430%				98,120		
496	2037	Replacements	-	3/31/2022	3/31/2067	218,435	218,435	4.430%	4.430%				218,435		
497	2037	Replacements	-	3/31/2023	3/31/2068	218,435	218,435	4.430%	4.430%				218,435		
498	2037	Replacements	-	3/31/2024	3/31/2069	218,435	218,435	4.430%	4.430%				34,501		
499		FY 2037 Subtotal:	-	-	-	873,742	753,426						569,491		
500	2038	Replacements	-	3/31/2024	3/31/2069	218,435	183,935	4.430%	4.430%				183,935		
501	2038	Replacements	-	3/31/2025	3/31/2070	218,435	218,435	4.430%	4.430%				218,435		
502	2038	Replacements	-	3/31/2026	3/31/2071	218,435	218,435	4.430%	4.430%				209,470		
503		FY 2038 Subtotal:	-	-	-	655,306	620,806						611,840		
504	2039	Replacements	-	3/31/2026	3/31/2071	218,435	8,966	4.430%	4.430%				8,966		
505	2039	Replacements	-	3/31/2027	3/31/2072	218,435	218,435	4.430%	4.430%				218,435		
506	2039	Replacements	-	3/31/2028	3/31/2073	218,435	218,435	4.430%	4.430%				218,435		
507	2039	Replacements	-	3/31/2029	3/31/2074	218,435	218,435	4.430%	4.430%				202,426		
508		FY 2039 Subtotal:	-	-	-	873,742	664,272						648,262		
509	2040	Replacements	-	3/31/2029	3/31/2074	218,435	16,010	4.430%	4.430%				16,010		
510	2040	Replacements	-	3/31/2030	3/31/2075	218,435	218,435	4.430%	4.430%				218,435		
511	2040	Replacements	-	3/31/2031	3/31/2076	218,435	218,435	4.430%	4.430%				218,435		
512	2040	Replacements	-	3/31/2032	3/31/2077	218,435	218,435	4.430%	4.430%				218,435		
513	2040	Replacements	-	3/31/2033	3/31/2078	218,435	218,435	4.430%	4.430%				13,323		
514		FY 2040 Subtotal:	-	-	-	1,092,177	889,751						684,639		
515	2041	Replacements	-	3/31/2033	3/31/2078	218,435	205,112	4.430%	4.430%				205,112		
516	2041	Replacements	-	3/31/2034	3/31/2079	218,435	218,435	4.430%	4.430%				218,435		
517	2041	Replacements	-	3/31/2035	3/31/2080	218,435	218,435	4.430%	4.430%				218,435		
518	2041	Replacements	-	3/31/2036	3/31/2081	218,435	218,435	4.430%	4.430%				70,925		
519		FY 2041 Subtotal:	-	-	-	873,742	860,418						712,908		
520	2042	Replacements	-	3/31/2036	3/31/2081	218,435	147,510	4.430%	4.430%				147,510		
521	2042	Replacements	-	3/31/2037	3/31/2082	218,435	218,435	4.430%	4.430%				218,435		
522	2042	Replacements	-	3/31/2038	3/31/2083	218,435	218,435	4.430%	4.430%				218,435		
523	2042	Replacements	-	3/31/2039	3/31/2084	218,435	218,435	4.430%	4.430%				75,640		
524		FY 2042 Subtotal:	-	-	-	873,742	802,816						660,020		
525	2043	Replacements	-	3/31/2039	3/31/2084	218,435	142,796	4.430%	4.430%				142,796		
526	2043	Replacements	-	3/31/2040	3/31/2085	218,435	218,435	4.430%	4.430%				218,435		
527	2043	Replacements	-	3/31/2041	3/31/2086	218,435	218,435	4.430%	4.430%				218,435		
528	2043	Replacements	-	3/31/2042	3/31/2087	218,435	218,435	4.430%	4.430%				175,722		
529		FY 2043 Subtotal:	-	-	-	873,742	798,102						755,389		
530	2044	Replacements	-	3/31/2042	3/31/2087	218,435	42,713	4.430%	4.430%				42,713		
531	2044	Replacements	-	3/31/2043	3/31/2088	218,435	218,435	4.430%	4.430%				218,435		
532		FY 2044 Subtotal:	-	-	-	436,871	261,149						261,149		
533	2045	Replacements	-	3/31/2044	3/31/2089	218,435	218,435	4.430%	4.430%				218,435		
534		FY 2045 Subtotal:	-	-	-	218,435	218,435						218,435		
535	2046	Replacements	-	3/31/2045	3/31/2090	218,435	218,435	4.430%	4.430%				218,435		
536		FY 2046 Subtotal:	-	-	-	218,435	218,435						218,435		
537	2047	Replacements	-	3/31/2046	3/31/2091	218,435	218,435	4.430%	4.430%				218,435		
538		FY 2047 Subtotal:	-	-	-	218,435	218,435						218,435		
539	2048	Replacements	-	3/31/2047	3/31/2092	218,435	218,435	4.430%	4.430%				218,435		
540		FY 2048 Subtotal:	-	-	-	218,435	218,435						218,435		

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(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
541	2049	Replacements	-	3/31/2048	3/31/2093	218,435	218,435	4.430%	4.430%				218,435		
542		FY 2049 Subtotal:	-	-	-	218,435	218,435						218,435		
543	2050	Replacements	-	3/31/2049	3/31/2094	218,435	218,435	4.430%	4.430%				218,435		
544		FY 2050 Subtotal:	-	-	-	218,435	218,435						218,435		
545	2051	Replacements	-	3/31/2050	3/31/2095	218,435	218,435	4.430%	4.430%				218,435		
546		FY 2051 Subtotal:	-	-	-	218,435	218,435						218,435		
547	2052	Replacements	-	3/31/2051	3/31/2096	218,435	218,435	4.430%	4.430%				218,435		
548		FY 2052 Subtotal:	-	-	-	218,435	218,435						218,435		
549	2053	Replacements	-	3/31/2052	3/31/2097	218,435	218,435	4.430%	4.430%				218,435		
550		FY 2053 Subtotal:	-	-	-	218,435	218,435						218,435		
551	2054	Replacements	-	3/31/2053	3/31/2098	218,435	218,435	4.430%	4.430%				218,435		
552		FY 2054 Subtotal:	-	-	-	218,435	218,435						218,435		
553	2055	Replacements	-	3/31/2054	3/31/2099	218,435	218,435	4.430%	4.430%				218,435		
554		FY 2055 Subtotal:	-	-	-	218,435	218,435						218,435		
555	2056	Replacements	-	3/31/2055	3/31/2100	218,435	218,435	4.430%	4.430%				218,435		
556		FY 2056 Subtotal:	-	-	-	218,435	218,435						218,435		
557	2057	Replacements	-	3/31/2056	3/31/2101	218,435	218,435	4.430%	4.430%				218,435		
558		FY 2057 Subtotal:	-	-	-	218,435	218,435						218,435		
559	2058	Boise	Bureau of Reclamation	9/30/2008	9/30/2058	64	64	4.875%	4.875%				64		
560	2058	Bonneville Dam	Corps of Engineers	9/30/2008	9/30/2058	14,609	14,609	4.875%	4.875%				14,609		
561	2058	Columbia River Fish Mitigation	Corps of Engineers	9/30/2008	9/30/2058	36,554	36,554	4.875%	4.875%				36,554		
562	2058	Dworshak	Corps of Engineers	9/30/2008	9/30/2058	10	10	4.875%	4.875%				10		
563	2058	Hungry Horse Dam	Bureau of Reclamation	9/30/2008	9/30/2058	76	76	4.875%	4.875%				76		
564	2058	Ice Harbor	Corps of Engineers	9/30/2008	9/30/2058	14	14	4.875%	4.875%				14		
565	2058	Libby	Corps of Engineers	9/30/2008	9/30/2058	1,567	1,567	4.875%	4.875%				1,567		
566	2058	Little Goose	Corps of Engineers	9/30/2008	9/30/2058	13	13	4.875%	4.875%				13		
567	2058	Lower Granite	Corps of Engineers	9/30/2008	9/30/2058	24	24	4.875%	4.875%				24		
568	2058	Lower Monument	Corps of Engineers	9/30/2008	9/30/2058	9	9	4.875%	4.875%				9		
569	2058	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2008	9/30/2058	74	74	4.875%	4.875%				74		
570	2058	McNary	Corps of Engineers	9/30/2008	9/30/2058	215	215	4.875%	4.875%				215		
571	2058	The Dalles	Corps of Engineers	9/30/2008	9/30/2058	1,651	1,651	4.875%	4.875%				1,651		
572	2058	Chief Joseph	Corps of Engineers	9/30/2008	9/30/2058	3,500	3,500	4.875%	4.875%				3,500		
573	2058	Columbia Basin	Bureau of Reclamation	9/30/2008	9/30/2058	835	835	4.875%	4.875%				835		
574	2058	Replacements	-	3/31/2057	3/31/2102	218,435	218,435	4.430%	4.430%				218,435		
575		FY 2058 Subtotal:	-	-	-	277,651	277,651						277,651		
576	2059	Albeni Falls	Corps of Engineers	9/30/2009	9/30/2059	57	57	4.375%	4.375%				57		
577	2059	Columbia Basin	Bureau of Reclamation	9/30/2009	9/30/2059	1,338	1,338	4.375%	4.375%				1,338		
578	2059	Hungry Horse Dam	Bureau of Reclamation	9/30/2009	9/30/2059	60	60	4.375%	4.375%				60		
579	2059	John Day	Corps of Engineers	9/30/2009	9/30/2059	1,548	1,548	4.375%	4.375%				1,548		
580	2059	Yakima Chandler/Kenwick	Bureau of Reclamation	9/30/2009	9/30/2059	15	15	4.375%	4.375%				15		
581	2059	Replacements	-	3/31/2058	3/31/2103	218,435	218,435	4.430%	4.430%				218,435		
582		FY 2059 Subtotal:	-	-	-	221,454	221,454						221,454		
583	2060	Replacements	-	3/31/2059	3/31/2104	218,435	218,435	4.430%	4.430%				218,435		
584		FY 2060 Subtotal:	-	-	-	218,435	218,435						218,435		
585	2061	Replacements	-	3/31/2060	3/31/2105	218,435	218,435	4.430%	4.430%				218,435		
586		FY 2061 Subtotal:	-	-	-	218,435	218,435						218,435		
587	2062	Replacements	-	3/31/2061	3/31/2106	218,435	218,435	4.430%	4.430%				218,435		
588		FY 2062 Subtotal:	-	-	-	218,435	218,435						218,435		
589	2063	Replacements	-	3/31/2062	3/31/2107	218,435	218,435	4.430%	4.430%				218,435		
590		FY 2063 Subtotal:	-	-	-	218,435	218,435						218,435		
591	2064	Replacements	-	3/31/2063	3/31/2108	218,435	218,435	4.430%	4.430%				218,435		
592		FY 2064 Subtotal:	-	-	-	218,435	218,435						218,435		
593	2065	Replacements	-	3/31/2064	3/31/2109	218,435	218,435	4.430%	4.430%				218,435		
594		FY 2065 Subtotal:	-	-	-	218,435	218,435						218,435		
595	2066	Replacements	-	3/31/2065	3/31/2110	218,435	218,435	4.430%	4.430%				218,435		
596		FY 2066 Subtotal:	-	-	-	218,435	218,435						218,435		
597	2067	Replacements	-	3/31/2066	3/31/2111	218,435	218,435	4.430%	4.430%				218,435		
598		FY 2067 Subtotal:	-	-	-	218,435	218,435						218,435		
599	2068	Replacements	-	3/31/2067	3/31/2112	218,435	218,435	4.430%	4.430%				218,435		
600		FY 2068 Subtotal:	-	-	-	218,435	218,435						218,435		
601	2069	Replacements	-	3/31/2068	3/31/2113	218,435	218,435	4.430%	4.430%				218,435		
602		FY 2069 Subtotal:	-	-	-	218,435	218,435						218,435		

BP-18-FS-BPA-02A

TABLE 12D
Application of Amortization
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
603	Grand Total					19,044,233	17,485,744							16,023,912	12,887	3,125

TABLE 12E:
Summary of Interest
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T		
1	Obligation Type	General Project	Specific Project	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
2			Boise	295	54	54	54	54	54	54	54	54	54	54	54	54	54	4	4	3		
3			Columbia Basin	5,551	5,055	5,055	4,219	3,835	3,709	1,494	1,494	1,207	988	988	988	988	988	380	380	291		
4			Columbia Basin 3rd Powerhouse	903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
5			Hungry Horse Dam	709	257	225	225	225	225	225	225	225	225	225	225	225	74	59	59	59		
6		Bureau of Reclamation	Minidoka/Palisades	4,274	634	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632		
7			RRP - Green Springs	655	655	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8			Yakima Chandler/Kenniwick	43	43	43	43	43	43	43	43	43	43	43	43	43	43	1	1	1	1	
9			Yakima Roza	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10				Bureau of Reclamation Subtotal:	12,431	6,700	6,009	5,173	4,789	4,663	2,448	2,448	2,161	1,942	1,942	1,942	1,942	1,748	1,075	1,075	985	
11				Albeni Falls	208	29	29	29	29	29	29	29	29	29	29	29	29	29	4	4	4	
12				Bonneville 2nd Powerhouse	2,738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13				Bonneville Dam	7,164	6,884	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,213	5,213	4,172	4,172	2,500	1,433	1,315	
14				Chief Joseph	1,895	1,325	1,325	1,325	1,325	1,325	1,325	1,325	1,325	1,325	1,305	1,305	1,305	1,305	1,254	1,254	1,254	
15			Columbia River Fish Mitigation	62,178	59,849	62,523	64,822	64,822	64,822	64,822	64,822	64,822	64,822	64,338	64,338	63,224	62,975	55,499	51,473	42,875	30,470	
16			Cougar	765	763	763	763	763	763	763	763	763	763	763	763	763	569	146	146	136		
17			Detroit Lake/Big Cliff	101	99	99	82	82	82	82	82	82	82	81	81	81	70	17	17	17		
18	Appropriation		Dworshak	854	225	225	225	225	225	225	225	225	225	214	214	180	180	141	105	105		
19			Green Peter/Foster	37	35	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
20			Hills Creek	171	8	8	8	8	8	8	8	8	8	8	8	8	8	5	5	5	5	
21			Corps of Engineers	Ice Harbor	921	857	812	812	812	812	812	812	812	812	561	508	281	281	278	278	164	
22				John Day	1,653	864	827	827	827	827	827	827	827	827	639	639	487	487	342	330	303	303
23				Libby	1,515	411	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
24				Little Goose	862	426	155	155	155	155	155	155	155	155	154	154	150	150	143	143	143	4
25				Lookout Dam	740	423	423	423	423	423	423	423	423	423	423	423	423	423	39	11	11	11
26				Lost Creek	17	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27				Lower Granite	860	767	648	648	648	648	648	648	648	648	532	532	532	532	509	509	509	261
28				Lower Monument	741	586	392	392	392	392	392	392	392	392	391	391	207	207	178	178	166	64
29				McNary	744	698	637	637	637	637	637	637	637	637	637	637	307	307	274	274	90	90
30			The Dalles	2,413	2,112	2,112	2,112	2,112	2,112	2,112	2,112	2,112	2,112	2,044	2,044	2,035	2,035	189	182	90	90	
31				Corps of Engineers Subtotal:	86,580	76,370	76,472	78,755	78,755	78,755	78,755	78,755	78,755	78,755	77,440	77,387	74,290	74,042	62,127	56,450	47,537	34,296
32				Lower Snake Fish and Wildlife	16,572	225	206	206	206	206	206	206	206	206	157	157	144	144	139	139	122	55
33				Lower Snake Fish & Wildlife Subtotal:	16,572	225	206	206	206	206	206	206	206	206	157	157	144	144	139	139	122	55
34			Appropriation Subtotal:		115,582	83,295	82,688	84,134	83,750	83,624	81,409	81,409	81,122	79,539	79,486	76,377	76,128	64,015	57,664	48,735	35,336	
35				(Less Interest Income)	(632)	(611)	(1,144)	(975)	(1,006)	(898)	(977)	(951)	(847)	(928)	(889)	(784)	(1,861)	(1,585)	(1,690)	(2,030)	(2,048)	
36				Bureau Direct	29,897	30,768	33,493	36,480	33,936	31,396	31,182	30,615	30,615	30,615	30,615	30,615	29,056	25,331	15,319	12,859	9,246	
37				Interest Accrual	5,735	5,963	5,310	4,287	4,122	4,122	3,667	3,667	3,667	3,667	3,667	3,667	3,342	2,407	1,416	1,283	456	
38				Interest Accrual Reversal	(5,664)	(5,735)	(5,963)	(5,310)	(4,287)	(4,122)	(4,122)	(3,667)	(3,667)	(3,667)	(3,667)	(3,667)	(3,342)	(2,407)	(1,416)	(1,283)	(1,283)	
39				Conservation	9,405	9,407	9,252	9,252	9,252	8,774	7,654	2,837	2,095	937	211	92	-	-	-	-	-	
40				Interest Accrual	2,109	2,058	2,058	2,058	1,978	1,920	973	713	609	76	76	-	-	-	-	-	-	
41				Interest Accrual Reversal	(2,074)	(2,109)	(2,058)	(2,058)	(2,058)	(1,978)	(1,920)	(973)	(713)	(609)	(76)	(76)	-	-	-	-	-	
42				Construction (AS)	710	678	736	751	545	423	385	338	195	-	-	-	-	-	-	-	-	
43				Interest Accrual	179	172	152	58	24	-	-	-	-	-	-	-	-	-	-	-	-	
44				Interest Accrual Reversal	(184)	(179)	(172)	(152)	(58)	(24)	-	-	-	-	-	-	-	-	-	-	-	
45			BPA Borrowing	Corps	1,946	3,719	8,945	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,423	12,013	8,545	
46		Treasury			Interest Accrual	863	1,295	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,564	979	833	394
47					Interest Accrual Reversal	(718)	(863)	(1,295)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,564)	(979)	(833)	(833)
48				Fish and Wildlife	10,958	11,830	12,958	13,613	13,613	13,613	12,644	12,658	11,699	10,259	7,670	6,605	5,091	4,382	4,293	4,241	3,369	
49				Interest Accrual	1,998	1,998	1,688	1,688	1,688	1,688	1,445	1,445	865	430	430	5	5	-	-	-	-	-
50				Interest Accrual Reversal	(1,998)	(1,998)	(1,688)	(1,688)	(1,688)	(1,688)	(1,688)	(1,688)	(1,445)	(1,445)	(865)	(430)	(430)	(5)	(5)	-	-	-
51				Technology (G)	555	667	789	947	690	432	280	79	-	-	-	-	-	-	-	-	-	-
52				Interest Accrual	92	92	92	92	7	-	-	-	-	-	-	-	-	-	-	-	-	-
53				Interest Accrual Reversal	(92)	(92)	(92)	(92)	(92)	(7)	-	-	-	-	-	-	-	-	-	-	-	-
54				BPA Borrowing Subtotal:	53,085	57,058	64,449	72,764	70,481	67,464	63,580	58,885	57,466	53,583	50,986	50,265	45,348	38,875	29,764	26,803	17,845	
55		Federal Generation Replacements	Replacements	-	-	-	4,838	14,515	24,192	33,868	43,545	53,222	62,898	72,575	82,252	91,929	101,605	111,282	120,959	130,635		
56				Federal Generation Replacements Subtotal:	-	-	-	4,838	14,515	24,192	33,868	43,545	53,222	62,898	72,575	82,252	91,929	101,605	111,282	120,959	130,635	
57		Treasury Subtotal:		53,085	57,058	64,449	77,603	84,996	91,656	97,448	102,430	110,688	116,482	123,561	132,516	137,277	140,480	141,046	147,762	148,481		
58	Grand Total:			\$168,667	\$140,353	\$147,136	\$161,736	\$168,745	\$175,279	\$178,857	\$183,839	\$191,810	\$196,021	\$203,047	\$208,893	\$213,405	\$204,495	\$198,710	\$196,497	\$183,817		

TABLE 12E:
Summary of Interest
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	C	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM
1	Obligation Type	General Project	Specific Project	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
2			Boise	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3			Columbia Basin	254	188	162	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
4			Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5			Hungry Horse Dam	26	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
6		Bureau of Reclamation	Minidoka/Palisades	632	632	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7			RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8			Yakima Chandler/Kenniwick	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9			Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10			Bureau of Reclamation Subtotal:	915	830	172	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
11			Albeni Falls	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12			Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13			Bonneville Dam	1,134	1,134	720	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712
14			Chief Joseph	172	172	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
15			Columbia River Fish Mitigation	28,055	18,989	6,036	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782
16			Cougar	133	133	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17			Detroit Lake/Big Cliff	17	16	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Appropriation		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19			Green Peter/Foster	23	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20			Hills Creek	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21		Corps of Engineers	Ice Harbor	155	124	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22			John Day	288	281	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
23			Libby	83	77	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
24			Little Goose	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25			Lookout Dam	11	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26			Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27			Lower Granite	212	109	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28			Lower Monument	64	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29			McNary	90	40	39	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
30			The Dalles	90	90	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
31			Corps of Engineers Subtotal:	30,538	21,200	7,331	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906
32			Lower Snake Fish and Wildlife	54	46	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
33			Lower Snake Fish & Wildlife Subtotal:	54	46	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
34			Appropriation Subtotal:	31,507	22,076	7,507	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019
35			(Less Interest Income)	(2,038)	(2,068)	(2,154)	(2,165)	(2,224)	(2,360)	(2,399)	(2,456)	(2,492)	(2,525)	(2,172)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)
36			Bureau Direct	3,241	1,202	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37			Interest Accrual	39	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38			Interest Accrual Reversal	(456)	(39)	(39)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39			Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42			Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45		BPA Borrowing	Corps	4,265	1,786	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	Treasury		Interest Accrual	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47			Interest Accrual Reversal	(394)	(2)	(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48			Fish and Wildlife	1,712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51			Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54			BPA Borrowing Subtotal:	6,372	919	(2,066)	(2,165)	(2,224)	(2,360)	(2,399)	(2,456)	(2,492)	(2,525)	(2,172)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)
55		Federal Generation Replacements	Replacements	140,312	149,989	152,162	141,721	125,231	106,997	87,150	65,871	45,137	23,462	10,623	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677
56			Federal Generation Replacements Subtotal:	140,312	149,989	152,162	141,721	125,231	106,997	87,150	65,871	45,137	23,462	10,623	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677
57		Treasury Subtotal:		146,684	150,908	150,096	139,556	123,007	104,637	84,751	63,415	42,645	20,937	8,451	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668
58	Grand Total:			\$178,191	\$172,984	\$157,603	\$142,575	\$126,026	\$107,656	\$87,770	\$66,433	\$45,663	\$23,956	\$11,469	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687

TABLE 12E:
Summary of Interest
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE
1	Obligation Type	General Project	Specific Project	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	Total
2			Boise	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	1,084
3			Columbia Basin	99	99	99	99	99	99	-	-	-	-	-	-	-	-	-	-	-	40,459
4			Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	903
5			Hungry Horse Dam	6	6	6	6	6	6	3	-	-	-	-	-	-	-	-	-	-	3,871
6		Bureau of Reclamation	Minidoka/Palisades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,646
7			RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,311
8			Yakima Chandler/Kenniwick	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	584
9			Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
10			Bureau of Reclamation Subtotal:	109	109	109	109	109	109	62	-	-	-	-	-	-	-	-	-	-	63,860
11			Albeni Falls	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	662
12			Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,738
13			Bonneville Dam	712	712	712	712	712	712	-	-	-	-	-	-	-	-	-	-	-	95,865
14			Chief Joseph	171	171	171	171	171	171	-	-	-	-	-	-	-	-	-	-	-	26,998
15			Columbia River Fish Mitigation	1,782	1,782	1,782	1,782	1,782	1,782	-	-	-	-	-	-	-	-	-	-	-	1,100,961
16			Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,306
17			Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,283
18	Appropriation		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,806
19			Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	452
20			Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	295
21		Corps of Engineers	Ice Harbor	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	10,385
22			John Day	68	68	68	68	68	68	68	-	-	-	-	-	-	-	-	-	-	14,033
23			Libby	76	76	76	76	76	76	-	-	-	-	-	-	-	-	-	-	-	5,107
24			Little Goose	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	3,434
25			Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,908
26			Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
27			Lower Granite	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	10,426
28			Lower Monument	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,934
29			McNary	10	10	10	10	10	10	-	-	-	-	-	-	-	-	-	-	-	8,915
30			The Dalles	80	80	80	80	80	80	-	-	-	-	-	-	-	-	-	-	-	30,050
31			Corps of Engineers Subtotal:	2,906	2,906	2,906	2,906	2,906	2,906	70	-	-	-	-	-	-	-	-	-	-	1,338,589
32			Lower Snake Fish and Wildlife	4	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-	19,480
33			Lower Snake Fish & Wildlife Subtotal:	4	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-	19,480
34			Appropriation Subtotal:	3,019	3,019	3,019	3,019	3,019	3,019	132	-	-	-	-	-	-	-	-	-	-	1,421,928
35			(Less Interest Income)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(70,117)
36			Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	474,599
37			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,524
38			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(66,188)
39			Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69,169
40			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,627
41			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(16,701)
42			Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,761
43			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	585
44			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(769)
45		BPA Borrowing	Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206,595
46	Treasury		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,573
47			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(25,290)
48			Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161,210
49			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,062
50			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(19,060)
51			Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,437
52			Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	373
53			Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(464)
54			BPA Borrowing Subtotal:	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	839,926
55			Replacements	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	2,238,887
56		Federal Generation Replacements	Federal Generation Replacements Subtotal:	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	2,238,887
57		Treasury Subtotal:		8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	3,078,813
58	Grand Total:			\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$8,800	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$4,500,741

TABLE 12F:
Summary of Amortization
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
	Obligation Type	General Project	Specific Project	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
1																					
2			Boise	3,365	-	-	-	-	-	-	-	-	-	-	-	-	979	-	17	-	
3			Columbia Basin	6,927	-	14,236	6,543	2,140	37,701	-	-	4,879	3,727	-	-	-	11,891	-	1,987	877	
4			Columbia Basin 3rd Powerhouse	12,631	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5			Hungry Horse Dam	6,318	552	-	-	-	-	-	-	-	-	-	-	2,951	294	-	-	779	
6		Bureau of Reclamation	Minidoka/Palisades	50,911	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7			RRP - Green Springs	-	11,145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8			Yakima Chandler/Kenniwick	-	-	-	-	-	-	-	-	-	-	-	-	-	833	-	-	-	
9			Yakima Roza	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10			Bureau of Reclamation Subtotal:	80,151	11,754	14,236	6,543	2,140	37,701	-	-	4,879	3,727	-	-	3,784	13,164	-	2,004	1,656	
11			Albani Falls	2,510	-	-	-	-	-	-	-	-	-	-	-	-	481	-	-	42	
12			Bonneville 2nd Powerhouse	38,293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13			Bonneville Dam	3,917	24,446	-	-	-	-	-	-	2,978	-	19,368	-	31,322	20,849	-	2,628	4,169	
14			Chief Joseph	7,970	-	-	-	-	-	-	-	347	-	-	-	992	-	-	-	24,727	
15			Columbia River Fish Mitigation	55,768	36,266	2,853	-	-	-	-	-	-	8,797	-	20,742	4,624	143,460	79,873	191,054	278,543	
16			Cougar	26	-	-	-	-	-	-	-	-	-	-	-	3,622	8,250	-	230	59	
17			Detroit Lake/Big Cliff	38	-	282	-	-	-	-	-	-	18	-	-	223	1,031	-	-	-	
18	Appropriation		Dworshak	8,803	-	-	-	-	-	-	-	-	199	-	630	-	761	713	-	2,380	
19			Green Peter/Foster	26	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20			Hills Creek	2,658	8	-	-	-	-	-	-	2	-	-	-	-	46	-	-	-	
21		Corps of Engineers	Ice Harbor	986	764	-	-	-	-	-	-	4,634	990	4,227	-	50	-	-	2,615	207	
22			John Day	11,433	619	-	-	-	-	-	-	3,510	-	2,830	-	2,827	233	601	-	356	
23			Libby	15,441	5,562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	
24			Little Goose	6,102	4,608	-	-	-	-	-	-	27	-	67	-	146	-	-	3,171	30	
25			Lookout Dam	5,170	-	-	-	-	-	-	-	-	-	-	-	7,490	572	-	-	-	
26			Lost Creek	118	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27			Lower Granite	1,311	2,025	-	-	-	-	-	-	2,131	-	-	-	434	-	-	5,669	1,156	
28			Lower Monument	2,160	3,301	-	-	-	-	-	-	29	-	3,423	-	549	-	285	2,332	-	
29			McNary	635	1,046	-	-	-	-	-	-	-	-	6,138	-	646	-	4,080	-	-	
30			The Dalles	4,579	-	-	-	-	-	-	-	1,226	-	182	-	36,019	140	2,030	-	-	
31			Corps of Engineers Subtotal:	167,945	78,991	3,135	-	-	-	-	-	23,897	990	57,605	4,624	228,588	112,142	198,050	297,569	87,618	
32		Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	228,843	325	-	-	-	-	-	-	-	897	-	230	-	102	-	379	1,534	
33			Lower Snake Fish & Wildlife Subtotal:	228,843	325	-	-	-	-	-	-	-	897	-	230	-	102	-	379	1,534	11
34		Appropriation Subtotal:		476,940	91,070	17,372	6,543	2,140	37,701	-	4,879	28,520	990	57,835	4,624	232,474	125,306	198,429	301,107	89,285	
35			Bureau Direct	-	-	105,000	120,000	97,000	19,000	-	-	-	-	-	25,000	121,000	188,484	101,516	66,000	222,000	
36			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38			Conservation	-	29,000	-	-	19,000	16,000	142,000	97,000	69,000	39,000	6,000	25,000	-	-	-	-	-	
39			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41			Construction (AS)	-	15,150	5,250	18,100	7,000	5,800	3,150	5,600	5,950	-	-	-	-	-	-	-	-	
42			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44		BPA Borrowing	Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	15,000	53,000	81,389	141,591	
45			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47			Fish and Wildlife	-	-	46,000	-	-	31,000	-	25,000	-	80,000	55,000	26,000	56,000	8,000	13,000	40,000	51,000	
48	Bond		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
49			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50			Technology (G)	-	-	-	-	35,000	14,000	5,000	5,000	-	-	-	-	-	-	-	-	-	
51			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
53			BPA Borrowing Subtotal:	-	44,150	156,250	138,100	158,000	85,800	150,150	132,600	74,950	119,000	61,000	76,000	177,000	211,484	167,516	187,389	414,591	
54			Replacements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56		Federal Generation Replacements	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57			Federal Generation Replacements Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58			Discounts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
59		Make Whole Call	Premiums	-	-	-	-	-	-	-	-	-	-	-	-	2,308	4,526	4,955	-	1,098	
60			Make Whole Call Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	2,308	4,526	4,955	-	1,098	
61		Bond Subtotal:		-	44,150	156,250	138,100	158,000	85,800	150,150	132,600	74,950	119,000	61,000	76,000	177,000	211,484	167,516	187,389	414,591	
62		Irrigation Assistance	Irrigation Assistance	50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347	
63	Irrigation		Irrigation Assistance Subtotal:	50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347	
64		Irrigation Subtotal:		50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347	
65	Grand Total:			\$527,709	\$162,454	\$230,194	\$168,960	\$174,887	\$139,561	\$162,996	\$152,596	\$117,013	\$140,745	\$124,954	\$91,811	\$413,538	\$338,786	\$376,469	\$488,496	\$508,223	

TABLE 12F:
Summary of Amortization
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	C	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
Obligation Type	General Project	Specific Project	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
1																				
2		Boise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		Columbia Basin	1,742	922	2,171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5		Hungry Horse Dam	515	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Bureau of Reclamation	Minidoka/Palisades	-	19,450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		RRP - Green Springs	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8		Yakima Chandler/Kemmiwick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10		Bureau of Reclamation Subtotal:	2,257	20,377	2,171															
11		Albeni Falls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		Bonneville Dam	-	11,064	268	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14		Chief Joseph	-	31	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15		Columbia River Fish Mitigation	236,036	387,078	158,903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16		Cougar	12	423	4,088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		Detroit Lake/Big Cliff	18	31	528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Appropriation	Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19		Green Peter/Foster	472	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20		Hills Creek	12	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21		Ice Harbor	819	3,847	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22		John Day	175	6,325	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		Libby	152	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24		Little Goose	-	-	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25		Lookout Dam	17	294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		Lost Creek	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27		Lower Granite	2,653	3,475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28		Lower Monument	1,430	245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29		McNary	1,324	11	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30		The Dalles	-	305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31		Corps of Engineers Subtotal:	243,125	413,453	164,881															
32		Lower Snake Fish and Wildlife	222	1,378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	Lower Snake Fish & Wildlife	Lower Snake Fish & Wildlife Subtotal:	222	1,378																
34	Appropriation Subtotal:		245,604	435,208	167,052															
35		Bureau Direct	130,000	29,000	32,479															
36		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38		Conservation																		
39		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41		Construction (AS)																		
42		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	BPA Borrowing	Corps	90,409	53,000	2,396															
45		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47		Fish and Wildlife	44,000																	
48	Bond	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50		Technology (G)																		
51		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53		BPA Borrowing Subtotal:	264,409	82,000	34,875															
54		Replacements																		
55		Principal Accrual	-	-	338,751	569,491	611,840	648,262	684,639	712,908	660,020	755,389	261,149	218,435	218,435	218,435	218,435	218,435	218,435	218,435
56	Federal Generation Replacements	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57		Federal Generation Replacements Subtotal:			338,751	569,491	611,840	648,262	684,639	712,908	660,020	755,389	261,149	218,435	218,435	218,435	218,435	218,435	218,435	218,435
58		Discounts				(3,125)														
59		Premiums																		
60		Make Whole Call Subtotal:				(3,125)														
61		Bond Subtotal:	264,409	82,000	376,751	569,491	611,840	648,262	684,639	712,908	660,020	755,389	261,149	218,435	218,435	218,435	218,435	218,435	218,435	218,435
62		Irrigation Assistance	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-	-	-
63	Irrigation	Irrigation Assistance Subtotal:		7,761	28,920	15,778		14,181			73,659			11,579						
64		Irrigation Subtotal:		7,761	28,920	15,778		14,181			73,659			11,579						
65	Grand Total:		\$510,012	\$524,969	\$572,724	\$585,269	\$611,840	\$662,444	\$684,639	\$712,908	\$733,679	\$755,389	\$261,149	\$230,014	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435

TABLE 12F:
Summary of Amortization
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	C	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	
	Obligation Type	General Project	Specific Project	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	Total	
1																							
2			Boise	-	-	-	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	-	4,425
3			Columbia Basin	-	-	-	-	-	-	835	1,338	-	-	-	-	-	-	-	-	-	-	-	97,915
4			Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,631
5			Hungry Horse Dam	-	-	-	-	-	-	76	60	-	-	-	-	-	-	-	-	-	-	-	11,549
6		Bureau of Reclamation	Minidoka/Palisades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70,403
7			RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,148
8			Yakima Chandler/Kenwick	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	848
9			Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
10			Bureau of Reclamation Subtotal:	-	-	-	-	-	-	975	1,414	-	-	-	-	-	-	-	-	-	-	-	208,933
11			Albeni Falls	-	-	-	-	-	-	-	57	-	-	-	-	-	-	-	-	-	-	-	3,090
12			Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38,293
13			Bonneville Dam	-	-	-	-	-	-	14,609	-	-	-	-	-	-	-	-	-	-	-	-	135,618
14			Chief Joseph	-	-	-	-	-	-	3,500	-	-	-	-	-	-	-	-	-	-	-	-	37,578
15			Columbia River Fish Mitigation	-	-	-	-	-	-	36,554	-	-	-	-	-	-	-	-	-	-	-	-	1,697,384
16			Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,710
17			Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,168
18	Appropriation		Dworshak	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	13,495
19			Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	863
20			Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,867
21		Corps of Engineers	Ice Harbor	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	19,152
22			John Day	-	-	-	-	-	-	-	-	1,548	-	-	-	-	-	-	-	-	-	-	30,473
23			Libby	-	-	-	-	-	-	1,567	-	-	-	-	-	-	-	-	-	-	-	-	22,777
24			Little Goose	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	14,231
25			Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,543
26			Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272
27			Lower Granite	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	18,878
28			Lower Monument	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	13,764
29			McNary	-	-	-	-	-	-	215	-	-	-	-	-	-	-	-	-	-	-	-	15,096
30			The Dalles	-	-	-	-	-	-	1,651	-	-	-	-	-	-	-	-	-	-	-	-	46,132
31			Corps of Engineers Subtotal:	-	-	-	-	-	-	58,167	1,605	-	-	-	-	-	-	-	-	-	-	-	2,142,385
32		Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	-	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-	-	233,996
33			Lower Snake Fish & Wildlife Subtotal:	-	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-	-	233,996
34		Appropriation Subtotal:		-	-	-	-	-	-	59,216	3,018	-	-	-	-	-	-	-	-	-	-	-	2,585,313
35			Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,256,479
36			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38			Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,000
39			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41			Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66,000
42			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44		BPA Borrowing	Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	436,784
45			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47			Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	475,000
48	Bond		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50			Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59,000
51			Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53			BPA Borrowing Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,735,264
54			Replacements	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	10,703,335
55		Federal Generation Replacements	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56			Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57			Federal Generation Replacements Subtotal:	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	10,703,335
58			Discounts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3,125)
59		Make Whole Call	Premiums	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,887
60			Make Whole Call Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,761
61		Bond Subtotal:		218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	13,441,724
62		Irrigation Assistance	Irrigation Assistance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,075
63	Irrigation		Irrigation Assistance Subtotal:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,075
64		Irrigation Subtotal:		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442,075
65	Grand Total:			\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$277,651	\$221,454	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$16,469,111

13. REPAYMENT STUDY DATA, FY 2019 STUDY, POST-SHIFT

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1	Albeni Falls	09/1955	09/2005	6.910%	25,494	0		
2	Albeni Falls	09/1956	09/2005	6.910%	11	0		
3	Albeni Falls	09/1957	09/2005	6.910%	10	0		
4	Albeni Falls	09/1958	09/2005	6.910%	11	0		
5	Albeni Falls	09/1959	09/2005	6.910%	11	0		
6	Albeni Falls	09/1960	09/2005	6.910%	10	0		
7	Albeni Falls	09/1961	09/2005	6.910%	11	0		
8	Albeni Falls	09/1962	09/2005	6.910%	11	0		
9	Albeni Falls	09/1963	09/2005	6.910%	10	0		
10	Albeni Falls	09/1964	09/2005	6.910%	11	0		
11	Albeni Falls	09/1965	09/2005	6.910%	11	0		
12	Albeni Falls	09/1966	09/2005	6.910%	10	0		
13	Albeni Falls	09/1967	09/2005	6.910%	11	0		
14	Albeni Falls	09/1968	09/2005	6.910%	11	0		
15	Albeni Falls	09/1969	09/2005	6.910%	10	0		
16	Albeni Falls	09/1970	09/2005	6.910%	11	0		
17	Albeni Falls	09/1971	09/2005	6.910%	11	0		
18	Albeni Falls	09/1972	09/2005	6.910%	10	0		
19	Albeni Falls	09/1973	09/2005	6.910%	11	0		
20	Albeni Falls	09/1974	09/2005	6.910%	11	0		
21	Albeni Falls	09/1975	09/2005	6.910%	10	0		
22	Albeni Falls	09/1976	09/2005	6.910%	11	0		
23	Albeni Falls	09/1977	09/2005	6.910%	11	0		
24	Albeni Falls	09/1978	09/2005	6.910%	10	0		
25	Albeni Falls	09/1979	09/2005	6.910%	11	0		
26	Albeni Falls	09/1980	09/2005	6.910%	11	0		
27	Albeni Falls	09/1981	09/2005	6.910%	10	0		
28	Albeni Falls	09/1982	09/2005	6.910%	11	0		
29	Albeni Falls	09/1983	09/2005	6.910%	11	0		
30	Albeni Falls	09/1985	09/2005	6.910%	7	0		
31	Albeni Falls	09/1986	09/2005	6.910%	293	0		
32	Albeni Falls	09/1987	09/2005	6.910%	12	0		
33	Albeni Falls	09/1987	09/2005	8.888%	15	0		
34	Albeni Falls	09/1988	09/2005	8.500%	328	0		
35	Albeni Falls	09/1989	09/2005	9.250%	221	0		
36	Albeni Falls	09/1990	09/2005	8.875%	1,287	0		
37	Albeni Falls	09/1991	09/2005	8.750%	43	0		
38	Albeni Falls	09/1991	09/2005	8.750%	111	0		
39	Albeni Falls	09/1992	09/2005	8.500%	7	0		
40	Albeni Falls	09/1992	09/2005	8.500%	106	0		
41	Albeni Falls	09/1993	09/2005	7.875%	295	0		
42	Albeni Falls	09/1993	09/2005	7.875%	714	0		
43	Albeni Falls	09/1994	09/2019	7.125%	61	0		
44	Albeni Falls	09/1994	09/2019	7.125%	173	0		
45	Albeni Falls	09/1995	09/2010	7.090%	17	0		
46	Albeni Falls	09/1995	09/2010	7.890%	51	0		
47	Albeni Falls	09/1995	09/2045	7.150%	443	443		
48	Albeni Falls	09/1995	09/2045	7.150%	531	531		
49	Albeni Falls	09/1995	09/2045	7.150%	1,105	1,105		
50	Albeni Falls	09/1996	09/2016	7.290%	130	0		
51	Albeni Falls	09/1997	09/2047	7.150%	431	431		
52	Albeni Falls	09/2005	09/2055	5.125%	481	481		
53	Albeni Falls	09/2009	09/2059	4.375%	57	57		
54	Albeni Falls	09/2010	09/2060	4.250%	42	42		
55	Boise	09/1912	09/1962	3.000%	1,249	0		
56	Boise	09/1912	09/1962	3.000%	285	0		
57	Boise	09/1926	09/1976	3.000%	190	0		
58	Boise	09/1926	09/1976	3.000%	832	0		
59	Boise	09/1950	09/2000	3.000%	416	0		
60	Boise	09/1950	09/2000	3.000%	95	0		
61	Boise	09/1951	09/2001	3.000%	1,873	0		
62	Boise	09/1951	09/2001	3.000%	428	0		
63	Boise	09/1952	09/2001	3.000%	11	0		
64	Boise	09/1952	09/2001	3.000%	3	0		
65	Boise	09/1953	09/2001	3.000%	11	0		
66	Boise	09/1953	09/2001	3.000%	3	0		
67	Boise	09/1954	09/2001	3.000%	11	0		
68	Boise	09/1954	09/2001	3.000%	3	0		
69	Boise	09/1955	09/2001	3.000%	11	0		
70	Boise	09/1955	09/2001	3.000%	3	0		
71	Boise	09/1956	09/2001	3.000%	11	0		
72	Boise	09/1956	09/2001	3.000%	3	0		
73	Boise	09/1957	09/2001	3.000%	11	0		
74	Boise	09/1957	09/2001	3.000%	3	0		
75	Boise	09/1958	09/2001	3.000%	11	0		
76	Boise	09/1958	09/2001	3.000%	3	0		
77	Boise	09/1959	09/2001	3.000%	11	0		
78	Boise	09/1959	09/2001	3.000%	3	0		
79	Boise	09/1960	09/2001	3.000%	11	0		
80	Boise	09/1960	09/2001	3.000%	3	0		
81	Boise	09/1961	09/2001	3.000%	11	0		
82	Boise	09/1961	09/2001	3.000%	3	0		
83	Boise	09/1962	09/2001	3.000%	11	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
84	Boise	09/1962	09/2001	3.000%	3	0		
85	Boise	09/1963	09/2001	3.000%	11	0		
86	Boise	09/1963	09/2001	3.000%	3	0		
87	Boise	09/1964	09/2001	3.000%	11	0		
88	Boise	09/1964	09/2001	3.000%	3	0		
89	Boise	09/1965	09/2001	3.000%	11	0		
90	Boise	09/1965	09/2001	3.000%	3	0		
91	Boise	09/1966	09/2001	3.000%	11	0		
92	Boise	09/1966	09/2001	3.000%	3	0		
93	Boise	09/1967	09/2001	3.000%	11	0		
94	Boise	09/1967	09/2001	3.000%	3	0		
95	Boise	09/1968	09/2001	3.000%	11	0		
96	Boise	09/1968	09/2001	3.000%	3	0		
97	Boise	09/1969	09/2001	3.000%	11	0		
98	Boise	09/1969	09/2001	3.000%	3	0		
99	Boise	09/1970	09/2001	3.000%	11	0		
100	Boise	09/1970	09/2001	3.000%	3	0		
101	Boise	09/1971	09/2001	3.000%	11	0		
102	Boise	09/1971	09/2001	3.000%	3	0		
103	Boise	09/1972	09/2001	3.000%	11	0		
104	Boise	09/1972	09/2001	3.000%	3	0		
105	Boise	09/1973	09/2001	3.000%	11	0		
106	Boise	09/1973	09/2001	3.000%	3	0		
107	Boise	09/1974	09/2001	3.000%	11	0		
108	Boise	09/1974	09/2001	3.000%	3	0		
109	Boise	09/1975	09/2001	3.000%	11	0		
110	Boise	09/1975	09/2001	3.000%	3	0		
111	Boise	09/1976	09/2001	3.000%	11	0		
112	Boise	09/1976	09/2001	3.000%	3	0		
113	Boise	09/1977	09/2001	3.000%	11	0		
114	Boise	09/1977	09/2001	3.000%	3	0		
115	Boise	09/1978	09/2001	3.000%	11	0		
116	Boise	09/1978	09/2001	3.000%	3	0		
117	Boise	09/1979	09/2001	3.000%	11	0		
118	Boise	09/1979	09/2001	3.000%	3	0		
119	Boise	09/1980	09/2001	3.000%	18	0		
120	Boise	09/1980	09/2001	3.000%	4	0		
121	Boise	09/1981	09/2001	3.000%	8	0		
122	Boise	09/1981	09/2001	3.000%	2	0		
123	Boise	09/1982	09/2001	3.000%	1	0		
124	Boise	09/1982	09/2001	3.000%	1	0		
125	Boise	09/1983	09/2001	3.000%	1	0		
126	Boise	09/1984	09/2001	10.750%	1,325	0		
127	Boise	09/1984	09/2001	10.750%	303	0		
128	Boise	09/1986	09/2001	6.710%	94	0		
129	Boise	09/1988	09/2001	8.500%	3	0		
130	Boise	09/1989	09/2001	9.250%	3,264	0		
131	Boise	09/1990	09/2001	8.875%	38	0		
132	Boise	09/1991	09/2001	8.750%	50	0		
133	Boise	09/1993	09/2001	7.875%	418	0		
134	Boise	09/1994	09/1999	7.125%	7	0		
135	Boise	09/1996	09/2046	6.950%	7	0		
136	Boise	09/1996	09/2046	7.150%	442	442		
137	Boise	09/1996	09/2046	7.150%	656	656		
138	Boise	09/1997	09/2047	6.950%	9	0		
139	Boise	09/1997	09/2047	7.150%	2,266	2,266		
140	Boise	09/2005	09/2055	5.125%	903	903		
141	Boise	09/2006	09/2056	4.500%	15	15		
142	Boise	09/2007	09/2057	5.000%	76	76		
143	Boise	09/2008	09/2058	4.875%	64	64		
144	Boise	09/2009	09/2059	4.375%	2	2		
145	Boise	09/2015	09/2065	3.250%	0	0		
146	Bonneville 2nd Powerhouse	09/1981	09/2031	7.150%	40,964	0		
147	Bonneville 2nd Powerhouse	09/1981	09/2031	7.150%	455	0		
148	Bonneville 2nd Powerhouse	09/1982	09/2032	7.150%	203,535	0		
149	Bonneville 2nd Powerhouse	09/1982	09/2032	7.150%	2,264	0		
150	Bonneville 2nd Powerhouse	09/1983	09/2033	7.150%	62,409	0		
151	Bonneville 2nd Powerhouse	09/1983	09/2033	7.150%	694	0		
152	Bonneville 2nd Powerhouse	09/1985	09/2033	7.150%	9,138	0		
153	Bonneville 2nd Powerhouse	09/1986	09/2033	7.150%	30,578	21,534		
154	Bonneville 2nd Powerhouse	09/1987	09/2033	7.150%	2,801	2,801		
155	Bonneville 2nd Powerhouse	09/1988	09/2033	7.150%	1,271	1,271		
156	Bonneville 2nd Powerhouse	09/1989	09/2033	7.150%	1,232	1,232		
157	Bonneville 2nd Powerhouse	09/1990	09/2033	7.150%	1,588	1,588		
158	Bonneville 2nd Powerhouse	09/1991	09/2033	8.750%	3,998	0		
159	Bonneville 2nd Powerhouse	09/1991	09/2033	8.750%	26	0		
160	Bonneville 2nd Powerhouse	09/1992	09/2033	8.500%	2,446	0		
161	Bonneville 2nd Powerhouse	09/1993	09/2033	7.875%	3,668	0		
162	Bonneville 2nd Powerhouse	09/1994	09/2044	7.150%	5,700	5,700		
163	Bonneville 2nd Powerhouse	09/1995	09/2045	7.150%	3,791	3,791		
164	Bonneville 2nd Powerhouse	09/1996	09/2046	7.150%	376	376		
165	Bonneville Dam	09/1938	09/1988	2.500%	11,726	0		
166	Bonneville Dam	09/1938	09/1988	2.500%	130	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
167	Bonneville Dam	09/1941	09/1991	2.500%	17,589	0		
168	Bonneville Dam	09/1941	09/1991	2.500%	196	0		
169	Bonneville Dam	09/1942	09/1992	2.500%	5,863	0		
170	Bonneville Dam	09/1942	09/1992	2.500%	65	0		
171	Bonneville Dam	09/1943	09/1993	2.500%	17,589	0		
172	Bonneville Dam	09/1943	09/1993	2.500%	196	0		
173	Bonneville Dam	09/1944	09/1994	2.500%	5,860	0		
174	Bonneville Dam	09/1944	09/1994	2.500%	65	0		
175	Bonneville Dam	09/1945	09/1994	2.500%	82	0		
176	Bonneville Dam	09/1945	09/1994	2.500%	1	0		
177	Bonneville Dam	09/1946	09/1994	2.500%	81	0		
178	Bonneville Dam	09/1946	09/1994	2.500%	1	0		
179	Bonneville Dam	09/1947	09/1994	2.500%	82	0		
180	Bonneville Dam	09/1947	09/1994	2.500%	1	0		
181	Bonneville Dam	09/1948	09/1994	2.500%	81	0		
182	Bonneville Dam	09/1948	09/1994	2.500%	1	0		
183	Bonneville Dam	09/1949	09/1994	2.500%	82	0		
184	Bonneville Dam	09/1949	09/1994	2.500%	1	0		
185	Bonneville Dam	09/1950	09/1994	2.500%	81	0		
186	Bonneville Dam	09/1950	09/1994	2.500%	11	0		
187	Bonneville Dam	09/1951	09/1994	2.500%	81	0		
188	Bonneville Dam	09/1951	09/1994	2.500%	11	0		
189	Bonneville Dam	09/1952	09/1994	2.500%	82	0		
190	Bonneville Dam	09/1952	09/1994	2.500%	1	0		
191	Bonneville Dam	09/1953	09/1994	2.500%	81	0		
192	Bonneville Dam	09/1953	09/1994	2.500%	1	0		
193	Bonneville Dam	09/1954	09/1994	2.500%	82	0		
194	Bonneville Dam	09/1954	09/1994	2.500%	1	0		
195	Bonneville Dam	09/1955	09/1994	2.500%	81	0		
196	Bonneville Dam	09/1955	09/1994	2.500%	1	0		
197	Bonneville Dam	09/1956	09/1994	2.500%	81	0		
198	Bonneville Dam	09/1956	09/1994	2.500%	1	0		
199	Bonneville Dam	09/1957	09/1994	2.500%	82	0		
200	Bonneville Dam	09/1957	09/1994	2.500%	1	0		
201	Bonneville Dam	09/1958	09/1994	2.500%	81	0		
202	Bonneville Dam	09/1958	09/1994	2.500%	1	0		
203	Bonneville Dam	09/1959	09/1994	2.500%	82	0		
204	Bonneville Dam	09/1959	09/1994	2.500%	1	0		
205	Bonneville Dam	09/1960	09/1994	2.500%	81	0		
206	Bonneville Dam	09/1960	09/1994	2.500%	1	0		
207	Bonneville Dam	09/1961	09/1994	2.500%	81	0		
208	Bonneville Dam	09/1961	09/1994	2.500%	1	0		
209	Bonneville Dam	09/1962	09/1994	2.500%	82	0		
210	Bonneville Dam	09/1962	09/1994	2.500%	1	0		
211	Bonneville Dam	09/1963	09/1994	2.500%	81	0		
212	Bonneville Dam	09/1963	09/1994	2.500%	1	0		
213	Bonneville Dam	09/1964	09/1994	2.500%	82	0		
214	Bonneville Dam	09/1964	09/1994	2.500%	1	0		
215	Bonneville Dam	09/1965	09/1994	2.500%	81	0		
216	Bonneville Dam	09/1965	09/1994	2.500%	1	0		
217	Bonneville Dam	09/1966	09/1994	2.500%	81	0		
218	Bonneville Dam	09/1966	09/1994	2.500%	1	0		
219	Bonneville Dam	09/1967	09/1994	2.500%	82	0		
220	Bonneville Dam	09/1967	09/1994	2.500%	1	0		
221	Bonneville Dam	09/1968	09/1994	2.500%	81	0		
222	Bonneville Dam	09/1968	09/1994	2.500%	1	0		
223	Bonneville Dam	09/1969	09/1994	2.500%	82	0		
224	Bonneville Dam	09/1969	09/1994	2.500%	1	0		
225	Bonneville Dam	09/1970	09/1994	2.500%	81	0		
226	Bonneville Dam	09/1970	09/1994	2.500%	1	0		
227	Bonneville Dam	09/1971	09/1994	2.500%	81	0		
228	Bonneville Dam	09/1971	09/1994	2.500%	1	0		
229	Bonneville Dam	09/1972	09/1994	2.500%	82	0		
230	Bonneville Dam	09/1972	09/1994	2.500%	1	0		
231	Bonneville Dam	09/1973	09/1994	2.500%	81	0		
232	Bonneville Dam	09/1973	09/1994	2.500%	1	0		
233	Bonneville Dam	09/1974	09/1994	2.500%	82	0		
234	Bonneville Dam	09/1974	09/1994	2.500%	1	0		
235	Bonneville Dam	09/1975	09/1994	2.500%	81	0		
236	Bonneville Dam	09/1975	09/1994	2.500%	1	0		
237	Bonneville Dam	09/1976	09/1994	2.500%	81	0		
238	Bonneville Dam	09/1976	09/1994	2.500%	1	0		
239	Bonneville Dam	09/1977	09/1994	2.500%	82	0		
240	Bonneville Dam	09/1977	09/1994	2.500%	1	0		
241	Bonneville Dam	09/1977	09/2027	7.150%	15,670	0		
242	Bonneville Dam	09/1978	09/1994	2.500%	81	0		
243	Bonneville Dam	09/1978	09/1994	2.500%	1	0		
244	Bonneville Dam	09/1979	09/1994	2.500%	82	0		
245	Bonneville Dam	09/1979	09/1994	2.500%	1	0		
246	Bonneville Dam	09/1980	09/1994	2.500%	81	0		
247	Bonneville Dam	09/1980	09/1994	2.500%	1	0		
248	Bonneville Dam	09/1981	09/1994	2.500%	81	0		
249	Bonneville Dam	09/1981	09/1994	2.500%	1	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
250	Bonneville Dam	09/1982	09/1994	2.500%	82	0		
251	Bonneville Dam	09/1982	09/1994	2.500%	2	0		
252	Bonneville Dam	09/1983	09/1994	2.500%	81	0		
253	Bonneville Dam	09/1983	09/1994	2.500%	1	0		
254	Bonneville Dam	09/1984	09/1994	10.750%	873	0		
255	Bonneville Dam	09/1984	09/1994	10.750%	10	0		
256	Bonneville Dam	09/1985	09/1994	2.500%	119	0		
257	Bonneville Dam	09/1986	09/1994	2.500%	555	0		
258	Bonneville Dam	09/1986	09/1994	11.375%	454	0		
259	Bonneville Dam	09/1987	09/1994	2.500%	260	0		
260	Bonneville Dam	09/1987	09/1994	8.875%	26	0		
261	Bonneville Dam	09/1988	09/1994	8.500%	4,199	0		
262	Bonneville Dam	09/1988	09/1994	8.500%	10	0		
263	Bonneville Dam	09/1989	09/1994	9.250%	877	0		
264	Bonneville Dam	09/1990	09/1994	8.875%	519	0		
265	Bonneville Dam	09/1990	09/1994	8.875%	651	0		
266	Bonneville Dam	09/1991	09/1994	8.750%	35	0		
267	Bonneville Dam	09/1991	09/1994	8.750%	3,193	0		
268	Bonneville Dam	09/1992	09/1994	8.500%	99	0		
269	Bonneville Dam	09/1992	09/1994	8.500%	25	0		
270	Bonneville Dam	09/1993	09/2018	7.880%	5,011	0		
271	Bonneville Dam	09/1994	09/2029	7.125%	536	0		
272	Bonneville Dam	09/1995	09/2000	7.330%	8	0		
273	Bonneville Dam	09/1995	09/2010	7.090%	25	0		
274	Bonneville Dam	09/1995	09/2020	7.250%	20	0		
275	Bonneville Dam	09/1995	09/2020	7.250%	22	0		
276	Bonneville Dam	09/1995	09/2030	7.860%	53	0		
277	Bonneville Dam	09/1995	09/2035	7.860%	98	0		
278	Bonneville Dam	09/1995	09/2045	7.150%	243	243		
279	Bonneville Dam	09/1995	09/2045	7.150%	410	410		
280	Bonneville Dam	09/1995	09/2045	7.150%	440	440		
281	Bonneville Dam	09/1995	09/2045	7.860%	374	0		
282	Bonneville Dam	09/1996	09/2016	7.290%	834	0		
283	Bonneville Dam	09/1996	09/2031	7.150%	22	0		
284	Bonneville Dam	09/1996	09/2046	7.150%	18	18		
285	Bonneville Dam	09/1996	09/2046	7.150%	18	18		
286	Bonneville Dam	09/1996	09/2046	7.150%	80	80		
287	Bonneville Dam	09/1996	09/2046	7.150%	109	109		
288	Bonneville Dam	09/1996	09/2046	7.150%	142	142		
289	Bonneville Dam	09/1996	09/2046	7.150%	223	223		
290	Bonneville Dam	09/1996	09/2046	7.150%	751	751		
291	Bonneville Dam	09/1996	09/2046	7.150%	1,322	1,322		
292	Bonneville Dam	09/1997	09/2022	7.230%	122	0		
293	Bonneville Dam	09/1997	09/2032	7.150%	518	0		
294	Bonneville Dam	09/1997	09/2047	7.150%	161	161		
295	Bonneville Dam	09/1999	09/2049	5.375%	19,368	19,368		
296	Bonneville Dam	09/2000	09/2050	6.125%	24,446	24,446		
297	Bonneville Dam	09/2001	09/2051	5.875%	2,530	2,530		
298	Bonneville Dam	09/2002	09/2052	5.500%	448	448		
299	Bonneville Dam	09/2003	09/2053	5.125%	4,581	4,581		
300	Bonneville Dam	09/2004	09/2054	5.375%	26,741	26,741		
301	Bonneville Dam	09/2005	09/2055	5.125%	19,725	19,725		
302	Bonneville Dam	09/2006	09/2056	4.500%	2,628	2,628		
303	Bonneville Dam	09/2007	09/2057	5.000%	1,124	1,124		
304	Bonneville Dam	09/2008	09/2058	4.875%	14,609	14,609		
305	Bonneville Dam	09/2009	09/2059	4.375%	2,744	2,744		
306	Bonneville Dam	09/2010	09/2060	4.250%	1,425	1,425		
307	Bonneville Dam	09/2011	09/2061	3.750%	10,962	10,962		
308	Bonneville Dam	09/2013	09/2063	2.875%	268	268		
309	Bonneville Dam	09/2014	09/2064	3.875%				
310	Bonneville Dam	09/2015	09/2065	3.250%	102	102		
311	Chief Joseph	09/1955	09/2005	6.910%	29,164	0		
312	Chief Joseph	09/1956	09/2006	6.950%	13,643	0		
313	Chief Joseph	09/1957	09/2007	6.980%	39,586	0		
314	Chief Joseph	09/1958	09/2008	7.020%	31,901	0		
315	Chief Joseph	09/1959	09/2008	7.020%	223	0		
316	Chief Joseph	09/1960	09/2008	7.020%	223	0		
317	Chief Joseph	09/1961	09/2008	7.020%	223	0		
318	Chief Joseph	09/1962	09/2008	7.020%	223	0		
319	Chief Joseph	09/1963	09/2008	7.020%	224	0		
320	Chief Joseph	09/1964	09/2008	7.020%	223	0		
321	Chief Joseph	09/1965	09/2008	7.020%	223	0		
322	Chief Joseph	09/1966	09/2008	7.020%	223	0		
323	Chief Joseph	09/1967	09/2008	7.020%	223	0		
324	Chief Joseph	09/1968	09/2008	7.020%	224	0		
325	Chief Joseph	09/1969	09/2008	7.020%	223	0		
326	Chief Joseph	09/1970	09/2008	7.020%	223	0		
327	Chief Joseph	09/1971	09/2008	7.020%	223	0		
328	Chief Joseph	09/1972	09/2008	7.020%	223	0		
329	Chief Joseph	09/1973	09/2008	7.020%	224	0		
330	Chief Joseph	09/1974	09/2008	7.020%	223	0		
331	Chief Joseph	09/1975	09/2008	7.020%	223	0		
332	Chief Joseph	09/1976	09/2008	7.020%	223	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
333	Chief Joseph	09/1977	09/2008	7.020%	223	0		
334	Chief Joseph	09/1977	09/2027	7.150%	30,512	0		
335	Chief Joseph	09/1978	09/2008	7.020%	224	0		
336	Chief Joseph	09/1978	09/2028	7.150%	75,669	0		
337	Chief Joseph	09/1979	09/2008	7.020%	223	0		
338	Chief Joseph	09/1979	09/2029	7.150%	60,079	0		
339	Chief Joseph	09/1980	09/2008	7.020%	223	0		
340	Chief Joseph	09/1981	09/2008	7.020%	223	0		
341	Chief Joseph	09/1982	09/2008	7.020%	223	0		
342	Chief Joseph	09/1983	09/2008	7.020%	224	0		
343	Chief Joseph	09/1984	09/2008	10.750%	909	0		
344	Chief Joseph	09/1985	09/2008	7.020%	46	0		
345	Chief Joseph	09/1985	09/2029	7.150%	16,372	0		
346	Chief Joseph	09/1986	09/2029	7.150%	5,363	0		
347	Chief Joseph	09/1987	09/2008	8.875%	104	0		
348	Chief Joseph	09/1987	09/2029	7.150%	3,036	0		
349	Chief Joseph	09/1988	09/2029	7.150%	2,722	0		
350	Chief Joseph	09/1989	09/2008	9.250%	327	0		
351	Chief Joseph	09/1989	09/2029	7.150%	2,227	0		
352	Chief Joseph	09/1990	09/2008	8.875%	1,024	0		
353	Chief Joseph	09/1990	09/2029	7.150%	4,505	0		
354	Chief Joseph	09/1991	09/2008	8.750%	34	0		
355	Chief Joseph	09/1991	09/2008	8.750%	293	0		
356	Chief Joseph	09/1991	09/2029	8.750%	3,840	0		
357	Chief Joseph	09/1992	09/2008	8.500%	142	0		
358	Chief Joseph	09/1992	09/2008	8.500%	717	0		
359	Chief Joseph	09/1992	09/2029	8.500%	2,032	0		
360	Chief Joseph	09/1993	09/2008	7.875%	42	0		
361	Chief Joseph	09/1993	09/2008	7.875%	794	0		
362	Chief Joseph	09/1993	09/2029	7.875%	1,360	0		
363	Chief Joseph	09/1994	09/2029	7.125%	129	0		
364	Chief Joseph	09/1994	09/2029	7.125%	65	0		
365	Chief Joseph	09/1994	09/2044	7.150%	4,280	4,017		
366	Chief Joseph	09/1995	09/2010	7.090%	15	0		
367	Chief Joseph	09/1995	09/2045	7.150%	147	147		
368	Chief Joseph	09/1995	09/2045	7.150%	562	562		
369	Chief Joseph	09/1995	09/2045	7.150%	712	712		
370	Chief Joseph	09/1995	09/2045	7.150%	784	784		
371	Chief Joseph	09/1996	09/2031	7.150%	27	0		
372	Chief Joseph	09/1996	09/2046	7.150%	3	3		
373	Chief Joseph	09/1996	09/2046	7.150%	4	4		
374	Chief Joseph	09/1996	09/2046	7.150%	355	355		
375	Chief Joseph	09/1996	09/2046	7.150%	729	729		
376	Chief Joseph	09/1997	09/2032	7.150%	166	0		
377	Chief Joseph	09/1997	09/2047	7.150%	657	657		
378	Chief Joseph	09/2001	09/2051	5.875%	345	345		
379	Chief Joseph	09/2002	09/2052	5.500%	2	2		
380	Chief Joseph	09/2003	09/2053	5.125%	992	992		
381	Chief Joseph	09/2008	09/2058	4.875%	3,500	3,500		
382	Chief Joseph	09/2009	09/2059	4.375%	24,727	24,727		
383	Chief Joseph	09/2011	09/2061	3.750%	4	4		
384	Chief Joseph	09/2012	09/2062	3.375%	28	28		
385	Chief Joseph	09/2013	09/2063	2.875%	10	10		
386	Columbia Basin	09/1941	09/1991	3.000%	10,919	0		
387	Columbia Basin	09/1941	09/1991	3.000%	1,505	0		
388	Columbia Basin	09/1942	09/1992	3.000%	16,165	0		
389	Columbia Basin	09/1942	09/1992	3.000%	3,011	0		
390	Columbia Basin	09/1943	09/1993	3.000%	8,083	0		
391	Columbia Basin	09/1943	09/1993	3.000%	1,505	0		
392	Columbia Basin	09/1944	09/1994	3.000%	16,165	0		
393	Columbia Basin	09/1944	09/1994	3.000%	3,011	0		
394	Columbia Basin	09/1948	09/1998	3.000%	24,247	0		
395	Columbia Basin	09/1948	09/1998	3.000%	4,516	0		
396	Columbia Basin	09/1949	09/1999	3.000%	24,247	0		
397	Columbia Basin	09/1949	09/1999	3.000%	4,516	0		
398	Columbia Basin	09/1950	09/2000	3.000%	16,165	0		
399	Columbia Basin	09/1950	09/2000	3.000%	3,011	0		
400	Columbia Basin	09/1951	09/2001	6.710%	28,255	0		
401	Columbia Basin	09/1951	09/2001	6.710%	5,790	0		
402	Columbia Basin	09/1952	09/2001	6.710%	258	0		
403	Columbia Basin	09/1952	09/2001	6.710%	48	0		
404	Columbia Basin	09/1953	09/2001	6.710%	258	0		
405	Columbia Basin	09/1953	09/2001	6.710%	48	0		
406	Columbia Basin	09/1954	09/2001	6.710%	258	0		
407	Columbia Basin	09/1954	09/2001	6.710%	48	0		
408	Columbia Basin	09/1955	09/2001	6.710%	258	0		
409	Columbia Basin	09/1955	09/2001	6.710%	48	0		
410	Columbia Basin	09/1956	09/2001	6.710%	259	0		
411	Columbia Basin	09/1956	09/2001	6.710%	48	0		
412	Columbia Basin	09/1957	09/2001	6.710%	258	0		
413	Columbia Basin	09/1957	09/2001	6.710%	48	0		
414	Columbia Basin	09/1958	09/2001	6.710%	258	0		
415	Columbia Basin	09/1958	09/2001	6.710%	48	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
416	Columbia Basin	09/1959	09/2001	6.710%	258	0		
417	Columbia Basin	09/1959	09/2001	6.710%	48	0		
418	Columbia Basin	09/1960	09/2001	6.710%	258	0		
419	Columbia Basin	09/1960	09/2001	6.710%	48	0		
420	Columbia Basin	09/1961	09/2001	6.710%	259	0		
421	Columbia Basin	09/1961	09/2001	6.710%	48	0		
422	Columbia Basin	09/1962	09/2001	6.710%	258	0		
423	Columbia Basin	09/1962	09/2001	6.710%	48	0		
424	Columbia Basin	09/1963	09/2001	6.710%	258	0		
425	Columbia Basin	09/1963	09/2001	6.710%	48	0		
426	Columbia Basin	09/1964	09/2001	6.710%	258	0		
427	Columbia Basin	09/1964	09/2001	6.710%	48	0		
428	Columbia Basin	09/1965	09/2001	6.710%	258	0		
429	Columbia Basin	09/1965	09/2001	6.710%	48	0		
430	Columbia Basin	09/1966	09/2001	6.710%	259	0		
431	Columbia Basin	09/1966	09/2001	6.710%	48	0		
432	Columbia Basin	09/1967	09/2001	6.710%	258	0		
433	Columbia Basin	09/1967	09/2001	6.710%	48	0		
434	Columbia Basin	09/1967	09/2017	7.290%	758	0		
435	Columbia Basin	09/1968	09/2001	6.710%	258	0		
436	Columbia Basin	09/1968	09/2001	6.710%	48	0		
437	Columbia Basin	09/1969	09/2001	6.710%	258	0		
438	Columbia Basin	09/1969	09/2001	6.710%	48	0		
439	Columbia Basin	09/1970	09/2001	6.710%	258	0		
440	Columbia Basin	09/1970	09/2001	6.710%	48	0		
441	Columbia Basin	09/1971	09/2001	6.710%	259	0		
442	Columbia Basin	09/1971	09/2001	6.710%	48	0		
443	Columbia Basin	09/1972	09/2001	6.710%	258	0		
444	Columbia Basin	09/1972	09/2001	6.710%	48	0		
445	Columbia Basin	09/1973	09/2001	6.710%	258	0		
446	Columbia Basin	09/1973	09/2001	6.710%	48	0		
447	Columbia Basin	09/1974	09/2001	6.710%	258	0		
448	Columbia Basin	09/1974	09/2001	6.710%	48	0		
449	Columbia Basin	09/1975	09/2001	6.710%	258	0		
450	Columbia Basin	09/1975	09/2001	6.710%	48	0		
451	Columbia Basin	09/1976	09/2001	6.710%	259	0		
452	Columbia Basin	09/1976	09/2001	6.710%	48	0		
453	Columbia Basin	09/1977	09/2001	6.710%	258	0		
454	Columbia Basin	09/1977	09/2001	6.710%	48	0		
455	Columbia Basin	09/1978	09/2001	6.710%	258	0		
456	Columbia Basin	09/1978	09/2001	6.710%	48	0		
457	Columbia Basin	09/1979	09/2001	6.710%	258	0		
458	Columbia Basin	09/1979	09/2001	6.710%	48	0		
459	Columbia Basin	09/1980	09/2001	6.710%	258	0		
460	Columbia Basin	09/1980	09/2001	6.710%	48	0		
461	Columbia Basin	09/1981	09/2001	6.710%	259	0		
462	Columbia Basin	09/1981	09/2001	6.710%	48	0		
463	Columbia Basin	09/1982	09/2001	6.710%	258	0		
464	Columbia Basin	09/1982	09/2001	6.710%	48	0		
465	Columbia Basin	09/1983	09/2001	6.710%	258	0		
466	Columbia Basin	09/1983	09/2001	6.710%	48	0		
467	Columbia Basin	09/1984	09/2001	10.750%	7,815	0		
468	Columbia Basin	09/1984	09/2001	10.750%	1,455	0		
469	Columbia Basin	09/1985	09/2001	6.710%	236	0		
470	Columbia Basin	09/1985	09/2001	6.710%	11	0		
471	Columbia Basin	09/1985	09/2001	12.375%	7,338	0		
472	Columbia Basin	09/1985	09/2001	12.375%	362	0		
473	Columbia Basin	09/1986	09/2001	6.710%	127	0		
474	Columbia Basin	09/1987	09/2001	6.710%	13	0		
475	Columbia Basin	09/1988	09/2001	8.500%	184	0		
476	Columbia Basin	09/1988	09/2001	8.500%	2	0		
477	Columbia Basin	09/1989	09/2001	9.250%	1,166	0		
478	Columbia Basin	09/1990	09/2001	8.875%	928	0		
479	Columbia Basin	09/1991	09/2001	8.750%	177	0		
480	Columbia Basin	09/1991	09/2001	8.750%	1,661	0		
481	Columbia Basin	09/1992	09/2001	8.500%	445	0		
482	Columbia Basin	09/1992	09/2001	8.500%	652	0		
483	Columbia Basin	09/1993	09/2001	6.710%	792	0		
484	Columbia Basin	09/1995	09/2000	6.620%	25	0		
485	Columbia Basin	09/1995	09/2020	7.250%	206	0		
486	Columbia Basin	09/1995	09/2030	7.150%	25	0		
487	Columbia Basin	09/1995	09/2030	7.860%	270	0		
488	Columbia Basin	09/1995	09/2030	7.860%	321	0		
489	Columbia Basin	09/1995	09/2030	7.860%	323	0		
490	Columbia Basin	09/1995	09/2030	7.860%	20	0		
491	Columbia Basin	09/1995	09/2045	7.150%	287	287		
492	Columbia Basin	09/1995	09/2045	7.150%	2,511	2,453		
493	Columbia Basin	09/1995	09/2045	7.860%	450	0		
494	Columbia Basin	09/1995	09/2045	7.860%	450	0		
495	Columbia Basin	09/1996	09/2026	7.150%	72	0		
496	Columbia Basin	09/1996	09/2031	7.150%	109	0		
497	Columbia Basin	09/1996	09/2031	7.150%	251	0		
498	Columbia Basin	09/1996	09/2046	7.150%	426	426		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
499	Columbia Basin	09/1996	09/2046	7.150%	368	368		
500	Columbia Basin	09/1997	09/2047	7.150%	3,393	3,393		
501	Columbia Basin	09/2001	09/2051	5.875%	69,226	69,226		
502	Columbia Basin	09/2005	09/2055	5.125%	10,963	10,963		
503	Columbia Basin	09/2006	09/2056	4.500%	1,987	1,987		
504	Columbia Basin	09/2007	09/2057	5.000%	929	929		
505	Columbia Basin	09/2008	09/2058	4.875%	835	835		
506	Columbia Basin	09/2009	09/2059	4.375%	1,338	1,338		
507	Columbia Basin	09/2010	09/2060	4.250%	877	877		
508	Columbia Basin	09/2011	09/2061	3.750%	1,723	1,723		
509	Columbia Basin	09/2012	09/2062	3.375%	11	11		
510	Columbia Basin	09/2013	09/2063	2.875%	3,083	3,083		
511	Columbia Basin	09/2014	09/2064	3.875%	18	18		
512	Columbia Basin	09/2015	09/2065	3.250%	0	0		
513	Columbia Basin 3rd Powerhouse	09/1975	09/2025	7.160%	47,328	0		
514	Columbia Basin 3rd Powerhouse	09/1975	09/2025	7.160%	8,702	0		
515	Columbia Basin 3rd Powerhouse	09/1976	09/2026	7.150%	41,330	0		
516	Columbia Basin 3rd Powerhouse	09/1976	09/2026	7.150%	8,037	0		
517	Columbia Basin 3rd Powerhouse	09/1977	09/2027	7.150%	42,764	0		
518	Columbia Basin 3rd Powerhouse	09/1977	09/2027	7.150%	7,964	0		
519	Columbia Basin 3rd Powerhouse	09/1978	09/2028	7.150%	42,399	0		
520	Columbia Basin 3rd Powerhouse	09/1978	09/2028	7.150%	7,896	0		
521	Columbia Basin 3rd Powerhouse	09/1979	09/2029	7.150%	84,118	0		
522	Columbia Basin 3rd Powerhouse	09/1979	09/2029	7.150%	15,666	0		
523	Columbia Basin 3rd Powerhouse	09/1983	09/2033	7.150%	712	0		
524	Columbia Basin 3rd Powerhouse	09/1983	09/2033	7.150%	13,003	0		
525	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	16,965	0		
526	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	13,192	0		
527	Columbia Basin 3rd Powerhouse	09/1984	09/2033	7.150%	3,160	0		
528	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	2,060	0		
529	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	41,772	0		
530	Columbia Basin 3rd Powerhouse	09/1985	09/2033	7.150%	107	0		
531	Columbia Basin 3rd Powerhouse	09/1986	09/2033	7.150%	1,851	0		
532	Columbia Basin 3rd Powerhouse	09/1986	09/2033	7.150%	15,538	0		
533	Columbia Basin 3rd Powerhouse	09/1987	09/2033	7.150%	1,730	0		
534	Columbia Basin 3rd Powerhouse	09/1987	09/2033	7.150%	14,439	0		
535	Columbia Basin 3rd Powerhouse	09/1988	09/2033	7.150%	2,294	0		
536	Columbia Basin 3rd Powerhouse	09/1988	09/2033	7.150%	4,351	0		
537	Columbia Basin 3rd Powerhouse	09/1989	09/2033	7.150%	10,902	0		
538	Columbia Basin 3rd Powerhouse	09/1990	09/2033	7.150%	6,383	0		
539	Columbia Basin 3rd Powerhouse	09/1994	09/2044	7.150%	12,631	12,631		
540	Columbia River Fish Mitigation	09/1991	09/2041	8.500%	3,969	0		
541	Columbia River Fish Mitigation	09/1992	09/2042	8.500%	874	0		
542	Columbia River Fish Mitigation	09/1993	09/2043	8.500%	85,846	0		
543	Columbia River Fish Mitigation	09/1994	09/2044	8.500%	39,454	0		
544	Columbia River Fish Mitigation	09/1995	09/2045	7.150%	43,343	39,282		
545	Columbia River Fish Mitigation	09/1996	09/2046	7.150%	2,431	2,431		
546	Columbia River Fish Mitigation	09/1999	09/2049	5.375%	14,115	14,115		
547	Columbia River Fish Mitigation	09/2000	09/2050	6.125%	47,006	47,006		
548	Columbia River Fish Mitigation	09/2001	09/2051	5.875%	6,168	6,168		
549	Columbia River Fish Mitigation	09/2002	09/2052	5.500%	8,797	8,797		
550	Columbia River Fish Mitigation	09/2003	09/2053	5.125%	68,440	68,440		
551	Columbia River Fish Mitigation	09/2004	09/2054	5.375%	60,581	60,581		
552	Columbia River Fish Mitigation	09/2005	09/2055	5.125%	52,039	52,039		
553	Columbia River Fish Mitigation	09/2006	09/2056	4.500%	366,395	366,395		
554	Columbia River Fish Mitigation	09/2007	09/2057	5.000%	53,525	53,525		
555	Columbia River Fish Mitigation	09/2008	09/2058	4.875%	36,554	36,554		
556	Columbia River Fish Mitigation	09/2009	09/2059	4.375%	103,203	103,203		
557	Columbia River Fish Mitigation	09/2010	09/2060	4.250%	56,832	56,832		
558	Columbia River Fish Mitigation	09/2011	09/2061	3.750%	106,014	106,014		
559	Columbia River Fish Mitigation	09/2012	09/2062	3.375%	101,616	101,616		
560	Columbia River Fish Mitigation	09/2013	09/2063	2.875%	95,274	95,274		
561	Columbia River Fish Mitigation	09/2014	09/2064	3.875%	110,071	110,071		
562	Columbia River Fish Mitigation	09/2015	09/2065	3.250%	64,291	64,291		
563	Columbia River Fish Mitigation	09/2016	09/2066	3.000%	30,190	30,190		
564	Cougar	09/1964	09/2014	7.230%	10,414	0		
565	Cougar	09/1965	09/2014	7.230%	20	0		
566	Cougar	09/1966	09/2014	7.230%	20	0		
567	Cougar	09/1967	09/2014	7.230%	20	0		
568	Cougar	09/1968	09/2014	7.230%	20	0		
569	Cougar	09/1969	09/2014	7.230%	20	0		
570	Cougar	09/1970	09/2014	7.230%	20	0		
571	Cougar	09/1971	09/2014	7.230%	20	0		
572	Cougar	09/1972	09/2014	7.230%	20	0		
573	Cougar	09/1973	09/2014	7.230%	20	0		
574	Cougar	09/1974	09/2014	7.230%	19	0		
575	Cougar	09/1975	09/2014	7.230%	20	0		
576	Cougar	09/1976	09/2014	7.230%	20	0		
577	Cougar	09/1977	09/2014	7.230%	20	0		
578	Cougar	09/1978	09/2014	7.230%	20	0		
579	Cougar	09/1979	09/2014	7.230%	20	0		
580	Cougar	09/1980	09/2014	7.230%	20	0		
581	Cougar	09/1981	09/2014	7.230%	20	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
582	Cougar	09/1982	09/2014	7.230%	20	0		
583	Cougar	09/1983	09/2014	7.230%	20	0		
584	Cougar	09/1984	09/2014	10.750%	1	0		
585	Cougar	09/1985	09/2014	7.230%	1	0		
586	Cougar	09/1986	09/2014	7.230%	104	0		
587	Cougar	09/1986	09/2014	11.375%	55	0		
588	Cougar	09/1987	09/2014	7.230%	45	0		
589	Cougar	09/1988	09/2014	8.500%	2	0		
590	Cougar	09/1989	09/2014	9.250%	6	0		
591	Cougar	09/1990	09/2014	8.875%	10	0		
592	Cougar	09/1991	09/2014	8.750%	1,015	0		
593	Cougar	09/1991	09/2014	8.750%	1	0		
594	Cougar	09/1992	09/2014	8.500%	2	0		
595	Cougar	09/1993	09/2014	7.875%	539	0		
596	Cougar	09/1994	09/2019	7.125%	31	0		
597	Cougar	09/1995	09/2000	7.330%	3	0		
598	Cougar	09/1997	09/2047	7.150%	26	26		
599	Cougar	09/2004	09/2054	5.375%	3,622	3,622		
600	Cougar	09/2005	09/2055	5.125%	8,130	8,130		
601	Cougar	09/2006	09/2056	4.500%	109	109		
602	Cougar	09/2007	09/2057	5.000%	120	120		
603	Cougar	09/2009	09/2059	4.375%	121	121		
604	Cougar	09/2010	09/2060	4.250%	59	59		
605	Cougar	09/2011	09/2061	3.750%	282	282		
606	Cougar	09/2012	09/2062	3.375%	139	139		
607	Cougar	09/2013	09/2063	2.875%	4,088	4,088		
608	Cougar	09/2014	09/2064	3.875%	12	12		
609	Cougar	09/2016	09/2066	3.000%	2	2		
610	Detroit Lake/Big Cliff	09/1953	09/2003	6.840%	12,533	0		
611	Detroit Lake/Big Cliff	09/1954	09/2004	6.880%	20,162	0		
612	Detroit Lake/Big Cliff	09/1955	09/2004	6.880%	18	0		
613	Detroit Lake/Big Cliff	09/1956	09/2004	6.880%	19	0		
614	Detroit Lake/Big Cliff	09/1957	09/2004	6.880%	18	0		
615	Detroit Lake/Big Cliff	09/1958	09/2004	6.880%	19	0		
616	Detroit Lake/Big Cliff	09/1959	09/2004	6.880%	18	0		
617	Detroit Lake/Big Cliff	09/1960	09/2004	6.880%	19	0		
618	Detroit Lake/Big Cliff	09/1961	09/2004	6.880%	18	0		
619	Detroit Lake/Big Cliff	09/1962	09/2004	6.880%	19	0		
620	Detroit Lake/Big Cliff	09/1963	09/2004	6.880%	18	0		
621	Detroit Lake/Big Cliff	09/1964	09/2004	6.880%	19	0		
622	Detroit Lake/Big Cliff	09/1965	09/2004	6.880%	18	0		
623	Detroit Lake/Big Cliff	09/1966	09/2004	6.880%	19	0		
624	Detroit Lake/Big Cliff	09/1967	09/2004	6.880%	18	0		
625	Detroit Lake/Big Cliff	09/1968	09/2004	6.880%	19	0		
626	Detroit Lake/Big Cliff	09/1969	09/2004	6.880%	18	0		
627	Detroit Lake/Big Cliff	09/1970	09/2004	6.880%	19	0		
628	Detroit Lake/Big Cliff	09/1971	09/2004	6.880%	18	0		
629	Detroit Lake/Big Cliff	09/1972	09/2004	6.880%	19	0		
630	Detroit Lake/Big Cliff	09/1973	09/2004	6.880%	18	0		
631	Detroit Lake/Big Cliff	09/1974	09/2004	6.880%	19	0		
632	Detroit Lake/Big Cliff	09/1975	09/2004	6.880%	18	0		
633	Detroit Lake/Big Cliff	09/1976	09/2004	6.880%	19	0		
634	Detroit Lake/Big Cliff	09/1977	09/2004	6.880%	18	0		
635	Detroit Lake/Big Cliff	09/1978	09/2004	6.880%	19	0		
636	Detroit Lake/Big Cliff	09/1979	09/2004	6.880%	18	0		
637	Detroit Lake/Big Cliff	09/1980	09/2004	6.880%	19	0		
638	Detroit Lake/Big Cliff	09/1981	09/2004	6.880%	18	0		
639	Detroit Lake/Big Cliff	09/1982	09/2004	6.880%	19	0		
640	Detroit Lake/Big Cliff	09/1983	09/2004	6.880%	18	0		
641	Detroit Lake/Big Cliff	09/1984	09/2004	10.750%	21	0		
642	Detroit Lake/Big Cliff	09/1985	09/2004	6.880%	6	0		
643	Detroit Lake/Big Cliff	09/1986	09/2004	11.375%	38	0		
644	Detroit Lake/Big Cliff	09/1987	09/2004	6.880%	3	0		
645	Detroit Lake/Big Cliff	09/1987	09/2004	8.875%	233	0		
646	Detroit Lake/Big Cliff	09/1988	09/2004	8.500%	68	0		
647	Detroit Lake/Big Cliff	09/1989	09/2004	9.250%	26	0		
648	Detroit Lake/Big Cliff	09/1990	09/2004	8.875%	115	0		
649	Detroit Lake/Big Cliff	09/1991	09/2004	8.750%	9	0		
650	Detroit Lake/Big Cliff	09/1991	09/2004	8.750%	20	0		
651	Detroit Lake/Big Cliff	09/1992	09/2004	8.500%	8	0		
652	Detroit Lake/Big Cliff	09/1993	09/2004	7.875%	211	0		
653	Detroit Lake/Big Cliff	09/1994	09/1999	7.125%	7	0		
654	Detroit Lake/Big Cliff	09/1995	09/2000	7.330%	13	0		
655	Detroit Lake/Big Cliff	09/1995	09/2045	7.150%	38	38		
656	Detroit Lake/Big Cliff	09/1996	09/2006	6.950%	24	0		
657	Detroit Lake/Big Cliff	09/2001	09/2051	5.875%	282	282		
658	Detroit Lake/Big Cliff	09/2002	09/2052	5.500%	18	18		
659	Detroit Lake/Big Cliff	09/2003	09/2053	5.125%	223	223		
660	Detroit Lake/Big Cliff	09/2005	09/2055	5.125%	1,031	1,031		
661	Detroit Lake/Big Cliff	09/2013	09/2063	2.875%	528	528		
662	Detroit Lake/Big Cliff	09/2014	09/2064	3.875%	18	18		
663	Detroit Lake/Big Cliff	09/2016	09/2066	3.000%	31	31		
664	Dworshak	09/1973	09/2023	7.190%	138,443	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
665	Dworshak	09/1973	09/2023	7.190%	836	0		
666	Dworshak	09/1974	09/2023	7.190%	515	0		
667	Dworshak	09/1974	09/2023	7.190%	3	0		
668	Dworshak	09/1975	09/2023	7.190%	518	0		
669	Dworshak	09/1975	09/2023	7.190%	3	0		
670	Dworshak	09/1976	09/2023	7.190%	518	0		
671	Dworshak	09/1976	09/2023	7.190%	3	0		
672	Dworshak	09/1977	09/2023	7.190%	518	0		
673	Dworshak	09/1977	09/2023	7.190%	3	0		
674	Dworshak	09/1978	09/2023	7.190%	518	0		
675	Dworshak	09/1978	09/2023	7.190%	3	0		
676	Dworshak	09/1979	09/2023	7.190%	518	0		
677	Dworshak	09/1979	09/2023	7.190%	3	0		
678	Dworshak	09/1980	09/2023	7.190%	518	0		
679	Dworshak	09/1980	09/2023	7.190%	3	0		
680	Dworshak	09/1981	09/2023	7.190%	518	0		
681	Dworshak	09/1981	09/2023	7.190%	3	0		
682	Dworshak	09/1982	09/2023	7.190%	518	0		
683	Dworshak	09/1982	09/2023	7.190%	3	0		
684	Dworshak	09/1983	09/2023	7.190%	523	0		
685	Dworshak	09/1983	09/2023	7.190%	3	0		
686	Dworshak	09/1984	09/2023	10.750%	2,499	0		
687	Dworshak	09/1984	09/2023	10.750%	15	0		
688	Dworshak	09/1985	09/2023	7.190%	1,141	0		
689	Dworshak	09/1986	09/2023	7.190%	197	0		
690	Dworshak	09/1987	09/2023	7.190%	36	0		
691	Dworshak	09/1987	09/2023	8.875%	65	0		
692	Dworshak	09/1988	09/2023	8.500%	61	0		
693	Dworshak	09/1989	09/2023	9.250%	63	0		
694	Dworshak	09/1990	09/2023	8.875%	245	0		
695	Dworshak	09/1990	09/2023	8.875%	24	0		
696	Dworshak	09/1991	09/2023	8.750%	224	0		
697	Dworshak	09/1992	09/2023	2.625%	4	0		
698	Dworshak	09/1992	09/2023	8.500%	28	0		
699	Dworshak	09/1992	09/2023	8.500%	24	0		
700	Dworshak	09/1993	09/2023	7.875%	41	0		
701	Dworshak	09/1993	09/2023	7.875%	1,872	0		
702	Dworshak	09/1994	09/2029	7.125%	1,351	0		
703	Dworshak	09/1994	09/2029	7.125%	964	0		
704	Dworshak	09/1995	09/2020	7.930%	55	0		
705	Dworshak	09/1995	09/2030	7.150%	218	0		
706	Dworshak	09/1995	09/2045	7.150%	1,162	1,162		
707	Dworshak	09/1996	09/2011	7.130%	107	0		
708	Dworshak	09/1996	09/2021	7.230%	26	0		
709	Dworshak	09/1996	09/2021	7.230%	184	0		
710	Dworshak	09/1996	09/2031	7.150%	6	0		
711	Dworshak	09/1996	09/2031	7.150%	203	0		
712	Dworshak	09/1996	09/2046	7.150%	3	3		
713	Dworshak	09/1996	09/2046	7.150%	4	4		
714	Dworshak	09/1996	09/2046	7.150%	46	46		
715	Dworshak	09/1997	09/2047	7.150%	7,588	7,588		
716	Dworshak	09/1999	09/2049	5.375%	630	630		
717	Dworshak	09/2002	09/2052	5.500%	199	199		
718	Dworshak	09/2003	09/2053	5.125%	761	761		
719	Dworshak	09/2005	09/2055	5.125%	713	713		
720	Dworshak	09/2006	09/2056	4.500%	73	73		
721	Dworshak	09/2008	09/2058	4.875%	10	10		
722	Dworshak	09/2009	09/2059	4.375%	2,307	2,307		
723	Dworshak	09/2014	09/2064	3.875%	50	0		
724	Green Peter/Foster	09/1967	09/2017	7.290%	24,445	0		
725	Green Peter/Foster	09/1968	09/2018	7.280%	12,180	0		
726	Green Peter/Foster	09/1969	09/2018	7.280%	39	0		
727	Green Peter/Foster	09/1970	09/2018	7.280%	40	0		
728	Green Peter/Foster	09/1971	09/2018	7.280%	39	0		
729	Green Peter/Foster	09/1972	09/2018	7.280%	39	0		
730	Green Peter/Foster	09/1973	09/2018	7.280%	39	0		
731	Green Peter/Foster	09/1974	09/2018	7.280%	39	0		
732	Green Peter/Foster	09/1975	09/2018	7.280%	39	0		
733	Green Peter/Foster	09/1976	09/2018	7.280%	39	0		
734	Green Peter/Foster	09/1977	09/2018	7.280%	39	0		
735	Green Peter/Foster	09/1978	09/2018	7.280%	39	0		
736	Green Peter/Foster	09/1979	09/2018	7.280%	39	0		
737	Green Peter/Foster	09/1980	09/2018	7.280%	40	0		
738	Green Peter/Foster	09/1981	09/2018	7.280%	39	0		
739	Green Peter/Foster	09/1982	09/2018	7.280%	39	0		
740	Green Peter/Foster	09/1983	09/2018	7.280%	39	0		
741	Green Peter/Foster	09/1984	09/2018	10.750%	15	0		
742	Green Peter/Foster	09/1985	09/2018	7.280%	16	0		
743	Green Peter/Foster	09/1986	09/2018	7.280%	3	0		
744	Green Peter/Foster	09/1986	09/2018	11.375%	3	0		
745	Green Peter/Foster	09/1987	09/2018	7.280%	1	0		
746	Green Peter/Foster	09/1987	09/2018	8.875%	2	0		
747	Green Peter/Foster	09/1988	09/2018	8.500%	13	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
748	Green Peter/Foster	09/1989	09/2018	9.250%	24	0		
749	Green Peter/Foster	09/1990	09/2018	8.875%	5	0		
750	Green Peter/Foster	09/1991	09/2018	8.750%	48	0		
751	Green Peter/Foster	09/1992	09/2018	8.500%	2	0		
752	Green Peter/Foster	09/1993	09/2018	7.875%	41	0		
753	Green Peter/Foster	09/1994	09/1999	7.125%	6	0		
754	Green Peter/Foster	09/1995	09/2000	7.330%	4	0		
755	Green Peter/Foster	09/1995	09/2020	7.250%	11	0		
756	Green Peter/Foster	09/1995	09/2020	7.250%	24	0		
757	Green Peter/Foster	09/1996	09/2046	7.150%	26	26		
758	Green Peter/Foster	09/2001	09/2051	5.875%	200	200		
759	Green Peter/Foster	09/2011	09/2061	3.750%	87	87		
760	Green Peter/Foster	09/2012	09/2062	3.375%	28	28		
761	Green Peter/Foster	09/2014	09/2064	3.875%	385	385		
762	Green Peter/Foster	09/2015	09/2065	3.250%	68	68		
763	Green Peter/Foster	09/2016	09/2066	3.000%	70	70		
764	Hills Creek	09/1962	09/2012	7.160%	10,353	0		
765	Hills Creek	09/1963	09/2012	7.160%	12	0		
766	Hills Creek	09/1964	09/2012	7.160%	13	0		
767	Hills Creek	09/1965	09/2012	7.160%	13	0		
768	Hills Creek	09/1966	09/2012	7.160%	13	0		
769	Hills Creek	09/1967	09/2012	7.160%	13	0		
770	Hills Creek	09/1968	09/2012	7.160%	13	0		
771	Hills Creek	09/1969	09/2012	7.160%	13	0		
772	Hills Creek	09/1970	09/2012	7.160%	13	0		
773	Hills Creek	09/1971	09/2012	7.160%	13	0		
774	Hills Creek	09/1972	09/2012	7.160%	13	0		
775	Hills Creek	09/1973	09/2012	7.160%	13	0		
776	Hills Creek	09/1974	09/2012	7.160%	13	0		
777	Hills Creek	09/1975	09/2012	7.160%	13	0		
778	Hills Creek	09/1976	09/2012	7.160%	13	0		
779	Hills Creek	09/1977	09/2012	7.160%	13	0		
780	Hills Creek	09/1978	09/2012	7.160%	13	0		
781	Hills Creek	09/1979	09/2012	7.160%	13	0		
782	Hills Creek	09/1980	09/2012	7.160%	13	0		
783	Hills Creek	09/1981	09/2012	7.160%	13	0		
784	Hills Creek	09/1982	09/2012	7.160%	13	0		
785	Hills Creek	09/1983	09/2012	7.160%	13	0		
786	Hills Creek	09/1984	09/2012	10.750%	52	0		
787	Hills Creek	09/1985	09/2012	7.160%	6	0		
788	Hills Creek	09/1987	09/2012	8.875%	3	0		
789	Hills Creek	09/1988	09/2012	8.500%	3	0		
790	Hills Creek	09/1990	09/2012	8.875%	3	0		
791	Hills Creek	09/1991	09/2012	8.750%	17	0		
792	Hills Creek	09/1992	09/2012	8.500%	1	0		
793	Hills Creek	09/1993	09/2012	7.875%	13	0		
794	Hills Creek	09/1996	09/2046	7.150%	28	28		
795	Hills Creek	09/2000	09/2050	6.125%	2,630	2,630		
796	Hills Creek	09/2001	09/2051	5.875%	8	8		
797	Hills Creek	09/2002	09/2052	5.500%	2	2		
798	Hills Creek	09/2005	09/2055	5.125%	46	46		
799	Hills Creek	09/2011	09/2061	3.750%	12	12		
800	Hills Creek	09/2012	09/2062	3.375%	142	142		
801	Hungry Horse Dam	09/1953	09/2003	6.840%	75,076	0		
802	Hungry Horse Dam	09/1953	09/2003	6.840%	2,126	0		
803	Hungry Horse Dam	09/1954	09/2003	6.840%	17	0		
804	Hungry Horse Dam	09/1954	09/2003	6.840%	1	0		
805	Hungry Horse Dam	09/1955	09/2003	6.840%	17	0		
806	Hungry Horse Dam	09/1955	09/2003	6.840%	1	0		
807	Hungry Horse Dam	09/1956	09/2003	6.840%	17	0		
808	Hungry Horse Dam	09/1956	09/2003	6.840%	1	0		
809	Hungry Horse Dam	09/1957	09/2003	6.840%	18	0		
810	Hungry Horse Dam	09/1957	09/2003	6.840%	1	0		
811	Hungry Horse Dam	09/1958	09/2003	6.840%	18	0		
812	Hungry Horse Dam	09/1958	09/2003	6.840%	1	0		
813	Hungry Horse Dam	09/1959	09/2003	6.840%	18	0		
814	Hungry Horse Dam	09/1959	09/2003	6.840%	1	0		
815	Hungry Horse Dam	09/1960	09/2003	6.840%	18	0		
816	Hungry Horse Dam	09/1960	09/2003	6.840%	1	0		
817	Hungry Horse Dam	09/1961	09/2003	6.840%	18	0		
818	Hungry Horse Dam	09/1961	09/2003	6.840%	1	0		
819	Hungry Horse Dam	09/1962	09/2003	6.840%	18	0		
820	Hungry Horse Dam	09/1962	09/2003	6.840%	1	0		
821	Hungry Horse Dam	09/1963	09/2003	6.840%	18	0		
822	Hungry Horse Dam	09/1963	09/2003	6.840%	1	0		
823	Hungry Horse Dam	09/1964	09/2003	6.840%	17	0		
824	Hungry Horse Dam	09/1964	09/2003	6.840%	1	0		
825	Hungry Horse Dam	09/1965	09/2003	6.840%	17	0		
826	Hungry Horse Dam	09/1965	09/2003	6.840%	1	0		
827	Hungry Horse Dam	09/1966	09/2003	6.840%	17	0		
828	Hungry Horse Dam	09/1966	09/2003	6.840%	1	0		
829	Hungry Horse Dam	09/1967	09/2003	6.840%	18	0		
830	Hungry Horse Dam	09/1967	09/2003	6.840%	1	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
831	Hungry Horse Dam	09/1968	09/2003	6.840%	18	0		
832	Hungry Horse Dam	09/1968	09/2003	6.840%	1	0		
833	Hungry Horse Dam	09/1969	09/2003	6.840%	18	0		
834	Hungry Horse Dam	09/1969	09/2003	6.840%	1	0		
835	Hungry Horse Dam	09/1970	09/2003	6.840%	18	0		
836	Hungry Horse Dam	09/1970	09/2003	6.840%	1	0		
837	Hungry Horse Dam	09/1971	09/2003	6.840%	18	0		
838	Hungry Horse Dam	09/1971	09/2003	6.840%	1	0		
839	Hungry Horse Dam	09/1972	09/2003	6.840%	18	0		
840	Hungry Horse Dam	09/1972	09/2003	6.840%	1	0		
841	Hungry Horse Dam	09/1973	09/2003	6.840%	18	0		
842	Hungry Horse Dam	09/1973	09/2003	6.840%	1	0		
843	Hungry Horse Dam	09/1974	09/2003	6.840%	17	0		
844	Hungry Horse Dam	09/1974	09/2003	6.840%	1	0		
845	Hungry Horse Dam	09/1975	09/2003	6.840%	17	0		
846	Hungry Horse Dam	09/1975	09/2003	6.840%	1	0		
847	Hungry Horse Dam	09/1976	09/2003	6.840%	10	0		
848	Hungry Horse Dam	09/1976	09/2003	6.840%	1	0		
849	Hungry Horse Dam	09/1977	09/2003	6.840%	18	0		
850	Hungry Horse Dam	09/1977	09/2003	6.840%	1	0		
851	Hungry Horse Dam	09/1978	09/2003	6.840%	18	0		
852	Hungry Horse Dam	09/1978	09/2003	6.840%	1	0		
853	Hungry Horse Dam	09/1979	09/2003	6.840%	18	0		
854	Hungry Horse Dam	09/1979	09/2003	6.840%	1	0		
855	Hungry Horse Dam	09/1980	09/2003	6.840%	18	0		
856	Hungry Horse Dam	09/1980	09/2003	6.840%	1	0		
857	Hungry Horse Dam	09/1981	09/2003	6.840%	22	0		
858	Hungry Horse Dam	09/1981	09/2003	6.840%	1	0		
859	Hungry Horse Dam	09/1982	09/2003	6.840%	1	0		
860	Hungry Horse Dam	09/1983	09/2003	6.840%	12	0		
861	Hungry Horse Dam	09/1983	09/2003	6.840%	1	0		
862	Hungry Horse Dam	09/1984	09/2003	10.750%	32	0		
863	Hungry Horse Dam	09/1984	09/2003	10.750%	1	0		
864	Hungry Horse Dam	09/1985	09/2003	12.375%	36	0		
865	Hungry Horse Dam	09/1985	09/2003	12.375%	37	0		
866	Hungry Horse Dam	09/1989	09/2003	9.250%	101	0		
867	Hungry Horse Dam	09/1990	09/2003	8.875%	58	0		
868	Hungry Horse Dam	09/1991	09/2003	8.750%	19	0		
869	Hungry Horse Dam	09/1992	09/2003	8.500%	9	0		
870	Hungry Horse Dam	09/1993	09/2003	7.875%	4,136	0		
871	Hungry Horse Dam	09/1993	09/2003	7.875%	2	0		
872	Hungry Horse Dam	09/1994	09/2019	7.125%	56	0		
873	Hungry Horse Dam	09/1995	09/2000	6.620%	156	0		
874	Hungry Horse Dam	09/1995	09/2000	6.620%	84	0		
875	Hungry Horse Dam	09/1995	09/2020	7.930%	450	0		
876	Hungry Horse Dam	09/1995	09/2030	7.150%	536	0		
877	Hungry Horse Dam	09/1995	09/2030	7.150%	1,198	0		
878	Hungry Horse Dam	09/1995	09/2045	7.150%	6,190	6,190		
879	Hungry Horse Dam	09/1995	09/2045	7.860%	14,354	0		
880	Hungry Horse Dam	09/1996	09/2046	7.150%	15	15		
881	Hungry Horse Dam	09/1996	09/2046	7.150%	2	2		
882	Hungry Horse Dam	09/1997	09/2007	6.950%	154	0		
883	Hungry Horse Dam	09/1997	09/2047	7.150%	111	111		
884	Hungry Horse Dam	09/2001	09/2051	5.875%	552	552		
885	Hungry Horse Dam	09/2005	09/2055	5.125%	2,951	2,951		
886	Hungry Horse Dam	09/2007	09/2057	5.000%	294	294		
887	Hungry Horse Dam	09/2008	09/2058	4.875%	76	76		
888	Hungry Horse Dam	09/2009	09/2059	4.375%	60	60		
889	Hungry Horse Dam	09/2010	09/2060	4.250%	779	779		
890	Hungry Horse Dam	09/2011	09/2061	3.750%	503	503		
891	Hungry Horse Dam	09/2012	09/2062	3.375%	3	3		
892	Hungry Horse Dam	09/2014	09/2064	3.875%	12	12		
893	Hungry Horse Dam	09/2015	09/2065	3.250%				
894	Ice Harbor	09/1962	09/2012	7.160%	664	0		
895	Ice Harbor	09/1962	09/2012	7.160%	59,699	0		
896	Ice Harbor	09/1963	09/2012	7.160%	46	0		
897	Ice Harbor	09/1963	09/2012	7.160%	1	0		
898	Ice Harbor	09/1964	09/2012	7.160%	46	0		
899	Ice Harbor	09/1964	09/2012	7.160%	1	0		
900	Ice Harbor	09/1965	09/2012	7.160%	46	0		
901	Ice Harbor	09/1965	09/2012	7.160%	1	0		
902	Ice Harbor	09/1966	09/2012	7.160%	46	0		
903	Ice Harbor	09/1966	09/2012	7.160%	1	0		
904	Ice Harbor	09/1967	09/2012	7.160%	46	0		
905	Ice Harbor	09/1967	09/2012	7.160%	1	0		
906	Ice Harbor	09/1968	09/2012	7.160%	46	0		
907	Ice Harbor	09/1968	09/2012	7.160%	1	0		
908	Ice Harbor	09/1969	09/2012	7.160%	46	0		
909	Ice Harbor	09/1969	09/2012	7.160%	1	0		
910	Ice Harbor	09/1970	09/2012	7.160%	46	0		
911	Ice Harbor	09/1970	09/2012	7.160%	1	0		
912	Ice Harbor	09/1971	09/2012	7.160%	46	0		
913	Ice Harbor	09/1971	09/2012	7.160%	1	0		

TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
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(\$000s) (FY 2019)

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
914	Ice Harbor	09/1972	09/2012	7.160%	46	0		
915	Ice Harbor	09/1972	09/2012	7.160%	1	0		
916	Ice Harbor	09/1973	09/2012	7.160%	46	0		
917	Ice Harbor	09/1973	09/2012	7.160%	1	0		
918	Ice Harbor	09/1974	09/2012	7.160%	46	0		
919	Ice Harbor	09/1974	09/2012	7.160%	1	0		
920	Ice Harbor	09/1975	09/2012	7.160%	46	0		
921	Ice Harbor	09/1975	09/2012	7.160%	1	0		
922	Ice Harbor	09/1976	09/2012	7.160%	46	0		
923	Ice Harbor	09/1976	09/2012	7.160%	1	0		
924	Ice Harbor	09/1976	09/2026	7.150%	20,472	0		
925	Ice Harbor	09/1976	09/2026	7.150%	228	0		
926	Ice Harbor	09/1977	09/2012	7.160%	46	0		
927	Ice Harbor	09/1977	09/2012	7.160%	1	0		
928	Ice Harbor	09/1978	09/2012	7.160%	46	0		
929	Ice Harbor	09/1978	09/2012	7.160%	1	0		
930	Ice Harbor	09/1979	09/2012	7.160%	46	0		
931	Ice Harbor	09/1979	09/2012	7.160%	1	0		
932	Ice Harbor	09/1980	09/2012	7.160%	46	0		
933	Ice Harbor	09/1980	09/2012	7.160%	1	0		
934	Ice Harbor	09/1981	09/2012	7.160%	46	0		
935	Ice Harbor	09/1981	09/2012	7.160%	1	0		
936	Ice Harbor	09/1982	09/2012	7.160%	46	0		
937	Ice Harbor	09/1982	09/2012	7.160%	1	0		
938	Ice Harbor	09/1983	09/2012	7.160%	46	0		
939	Ice Harbor	09/1983	09/2012	7.160%	1	0		
940	Ice Harbor	09/1985	09/2012	7.160%	41	0		
941	Ice Harbor	09/1985	09/2026	7.150%	21	0		
942	Ice Harbor	09/1986	09/2012	7.160%	137	0		
943	Ice Harbor	09/1987	09/2012	7.160%	3	0		
944	Ice Harbor	09/1987	09/2012	8.875%	71	0		
945	Ice Harbor	09/1987	09/2012	8.875%	1	0		
946	Ice Harbor	09/1988	09/2012	8.500%	8	0		
947	Ice Harbor	09/1988	09/2012	8.500%	57	0		
948	Ice Harbor	09/1989	09/2012	9.250%	51	0		
949	Ice Harbor	09/1990	09/2012	8.875%	427	0		
950	Ice Harbor	09/1991	09/2012	8.750%	348	0		
951	Ice Harbor	09/1992	09/2012	8.500%	177	0		
952	Ice Harbor	09/1993	09/2012	7.875%	3,192	0		
953	Ice Harbor	09/1993	09/2012	7.875%	1,645	0		
954	Ice Harbor	09/1994	09/2029	7.125%	328	0		
955	Ice Harbor	09/1994	09/2029	7.125%	520	0		
956	Ice Harbor	09/1995	09/2000	7.330%	2	0		
957	Ice Harbor	09/1995	09/2019	7.270%	84	0		
958	Ice Harbor	09/1995	09/2019	7.270%	171	0		
959	Ice Harbor	09/1995	09/2019	7.270%	849	0		
960	Ice Harbor	09/1996	09/2031	7.150%	78	0		
961	Ice Harbor	09/1996	09/2041	7.150%	371	371		
962	Ice Harbor	09/1997	09/2022	7.230%	66	0		
963	Ice Harbor	09/1997	09/2047	7.150%	67	67		
964	Ice Harbor	09/1999	09/2049	5.375%	5,516	5,516		
965	Ice Harbor	09/2000	09/2050	6.125%	548	548		
966	Ice Harbor	09/2001	09/2051	5.875%	764	764		
967	Ice Harbor	09/2002	09/2052	5.500%	1,014	1,014		
968	Ice Harbor	09/2003	09/2053	5.125%	50	50		
969	Ice Harbor	09/2004	09/2054	5.375%	3,321	3,321		
970	Ice Harbor	09/2008	09/2058	4.875%	14	14		
971	Ice Harbor	09/2009	09/2059	4.375%	2,615	2,615		
972	Ice Harbor	09/2010	09/2060	4.250%	207	207		
973	Ice Harbor	09/2011	09/2061	3.750%	819	819		
974	Ice Harbor	09/2012	09/2062	3.375%	115	115		
975	Ice Harbor	09/2015	09/2065	3.250%	3,175	3,175		
976	Ice Harbor	09/2016	09/2066	3.000%	558	558		
977	John Day	09/1968	09/2018	7.280%	27,254	0		
978	John Day	09/1969	09/2019	7.270%	96,104	0		
979	John Day	09/1970	09/2020	7.250%	23,656	0		
980	John Day	09/1971	09/2021	7.230%	34,974	0		
981	John Day	09/1972	09/2022	7.210%	11,502	0		
982	John Day	09/1984	09/2022	10.750%	3,677	0		
983	John Day	09/1985	09/2022	7.210%	6,490	0		
984	John Day	09/1985	09/2022	12.375%	1,209	0		
985	John Day	09/1986	09/2022	7.210%	3,227	0		
986	John Day	09/1986	09/2022	11.375%	713	0		
987	John Day	09/1987	09/2022	7.210%	706	0		
988	John Day	09/1987	09/2022	8.875%	4,353	0		
989	John Day	09/1988	09/2022	8.500%	332	0		
990	John Day	09/1988	09/2022	8.500%	199	0		
991	John Day	09/1989	09/2022	7.210%	30	0		
992	John Day	09/1989	09/2022	9.250%	377	0		
993	John Day	09/1990	09/2022	7.210%	37	0		
994	John Day	09/1990	09/2022	8.875%	543	0		
995	John Day	09/1991	09/2022	8.750%	13,218	0		
996	John Day	09/1991	09/2022	8.750%	144	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
997	John Day	09/1992	09/2022	7.210%	19	0		
998	John Day	09/1992	09/2022	8.500%	95	0		
999	John Day	09/1993	09/2022	7.875%	7,810	0		
1000	John Day	09/1993	09/2022	7.875%	9,585	0		
1001	John Day	09/1994	09/2019	7.125%	14	0		
1002	John Day	09/1994	09/2029	7.125%	1,252	0		
1003	John Day	09/1995	09/2000	7.330%	2	0		
1004	John Day	09/1995	09/2000	7.330%	9	0		
1005	John Day	09/1995	09/2020	7.250%	79	0		
1006	John Day	09/1995	09/2035	7.150%	22	22		
1007	John Day	09/1995	09/2035	7.150%	52	52		
1008	John Day	09/1995	09/2035	7.150%	121	121		
1009	John Day	09/1995	09/2045	7.150%	37	37		
1010	John Day	09/1995	09/2045	7.150%	608	608		
1011	John Day	09/1995	09/2045	7.150%	7,653	7,653		
1012	John Day	09/1996	09/2011	7.130%	237	0		
1013	John Day	09/1996	09/2016	7.290%	1,072	0		
1014	John Day	09/1997	09/2022	7.230%	133	0		
1015	John Day	09/1997	09/2047	7.150%	179	179		
1016	John Day	09/1999	09/2049	5.375%	3,510	3,510		
1017	John Day	09/2000	09/2050	6.125%	2,761	2,761		
1018	John Day	09/2001	09/2051	5.875%	619	619		
1019	John Day	09/2004	09/2054	5.375%	2,830	2,830		
1020	John Day	09/2005	09/2055	5.125%	2,827	2,827		
1021	John Day	09/2006	09/2056	4.500%	601	601		
1022	John Day	09/2007	09/2057	5.000%	233	233		
1023	John Day	09/2009	09/2059	4.375%	1,548	1,548		
1024	John Day	09/2010	09/2060	4.250%	356	356		
1025	John Day	09/2011	09/2061	3.750%	175	175		
1026	John Day	09/2012	09/2062	3.375%	6,161	6,161		
1027	John Day	09/2013	09/2063	2.875%	17	17		
1028	John Day	09/2015	09/2065	3.250%	163	163		
1029	Libby	09/1975	09/2025	7.160%	54,644	0		
1030	Libby	09/1976	09/2026	7.150%	153,432	0		
1031	Libby	09/1977	09/2026	7.150%	1,465	0		
1032	Libby	09/1978	09/2026	7.150%	1,465	0		
1033	Libby	09/1979	09/2026	7.150%	1,465	0		
1034	Libby	09/1980	09/2026	7.150%	1,465	0		
1035	Libby	09/1981	09/2026	7.150%	1,465	0		
1036	Libby	09/1982	09/2026	7.150%	1,465	0		
1037	Libby	09/1983	09/2026	7.150%	1,465	0		
1038	Libby	09/1984	09/2026	10.750%	104	0		
1039	Libby	09/1985	09/2026	7.150%	518	0		
1040	Libby	09/1986	09/2026	7.150%	283	0		
1041	Libby	09/1987	09/2026	7.150%	2	0		
1042	Libby	09/1988	09/2026	8.505%	35	0		
1043	Libby	09/1988	09/2038	7.150%	18,043	14,781		
1044	Libby	09/1989	09/2026	7.150%	1	0		
1045	Libby	09/1989	09/2026	9.250%	131	0		
1046	Libby	09/1990	09/2026	8.875%	11	0		
1047	Libby	09/1991	09/2026	8.750%	134	0		
1048	Libby	09/1992	09/2026	8.500%	100	0		
1049	Libby	09/1992	09/2026	8.500%	70	0		
1050	Libby	09/1993	09/2026	7.875%	600	0		
1051	Libby	09/1994	09/2029	7.125%	215	0		
1052	Libby	09/1994	09/2029	7.150%	286	0		
1053	Libby	09/1995	09/2030	7.150%	15	0		
1054	Libby	09/1995	09/2030	7.150%	41	0		
1055	Libby	09/1995	09/2030	7.150%	94	0		
1056	Libby	09/1997	09/2022	7.230%	432	0		
1057	Libby	09/1997	09/2047	7.150%	660	660		
1058	Libby	09/2001	09/2051	5.875%	5,562	5,562		
1059	Libby	09/2008	09/2058	4.875%	1,567	1,567		
1060	Libby	09/2010	09/2060	4.250%	40	40		
1061	Libby	09/2011	09/2061	3.750%	152	152		
1062	Libby	09/2012	09/2062	3.375%	16	16		
1063	Little Goose	09/1970	09/2020	7.250%	22,326	0		
1064	Little Goose	09/1971	09/2021	7.230%	42,962	0		
1065	Little Goose	09/1972	09/2021	7.230%	28	0		
1066	Little Goose	09/1973	09/2021	7.230%	29	0		
1067	Little Goose	09/1974	09/2021	7.230%	28	0		
1068	Little Goose	09/1975	09/2021	7.230%	29	0		
1069	Little Goose	09/1976	09/2021	7.230%	28	0		
1070	Little Goose	09/1977	09/2021	7.230%	29	0		
1071	Little Goose	09/1978	09/2021	7.230%	28	0		
1072	Little Goose	09/1978	09/2028	7.150%	49,578	0		
1073	Little Goose	09/1979	09/2021	7.230%	29	0		
1074	Little Goose	09/1980	09/2021	7.230%	28	0		
1075	Little Goose	09/1981	09/2021	7.230%	29	0		
1076	Little Goose	09/1982	09/2021	7.230%	28	0		
1077	Little Goose	09/1983	09/2021	7.230%	29	0		
1078	Little Goose	09/1984	09/2021	10.750%	201	0		
1079	Little Goose	09/1985	09/2021	7.230%	174	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1080	Little Goose	09/1985	09/2028	7.150%	47	0		
1081	Little Goose	09/1986	09/2021	7.230%	239	0		
1082	Little Goose	09/1987	09/2021	7.230%	6	0		
1083	Little Goose	09/1987	09/2021	8.875%	72	0		
1084	Little Goose	09/1988	09/2021	8.500%	12	0		
1085	Little Goose	09/1988	09/2021	8.500%	68	0		
1086	Little Goose	09/1989	09/2021	9.250%	77	0		
1087	Little Goose	09/1990	09/2021	8.875%	408	0		
1088	Little Goose	09/1990	09/2021	8.875%	21	0		
1089	Little Goose	09/1991	09/2021	8.750%	266	0		
1090	Little Goose	09/1992	09/2021	8.500%	66	0		
1091	Little Goose	09/1992	09/2021	8.500%	27	0		
1092	Little Goose	09/1993	09/2021	7.875%	276	0		
1093	Little Goose	09/1993	09/2021	7.875%	3,359	0		
1094	Little Goose	09/1994	09/2019	7.125%	37	0		
1095	Little Goose	09/1994	09/2029	7.125%	2,044	0		
1096	Little Goose	09/1995	09/2040	7.150%	17	17		
1097	Little Goose	09/1995	09/2040	7.150%	450	450		
1098	Little Goose	09/1995	09/2040	7.150%	733	733		
1099	Little Goose	09/1996	09/2046	7.150%	10	10		
1100	Little Goose	09/1996	09/2046	7.150%	10	10		
1101	Little Goose	09/1996	09/2046	7.150%	211	211		
1102	Little Goose	09/1996	09/2046	7.150%	241	241		
1103	Little Goose	09/1996	09/2046	7.150%	520	520		
1104	Little Goose	09/1996	09/2046	7.150%	3,909	3,909		
1105	Little Goose	09/1997	09/2047	7.150%	1	1		
1106	Little Goose	09/2001	09/2051	5.875%	4,608	4,608		
1107	Little Goose	09/2002	09/2052	5.500%	27	27		
1108	Little Goose	09/2003	09/2053	5.125%	146	146		
1109	Little Goose	09/2004	09/2054	5.375%	67	67		
1110	Little Goose	09/2008	09/2058	4.875%	13	13		
1111	Little Goose	09/2009	09/2059	4.375%	3,171	3,171		
1112	Little Goose	09/2010	09/2060	4.250%	30	30		
1113	Little Goose	09/2013	09/2063	2.875%	66	66		
1114	Lookout Dam	09/1955	09/2005	6.910%	34,290	0		
1115	Lookout Dam	09/1956	09/2005	6.910%	52	0		
1116	Lookout Dam	09/1957	09/2005	6.910%	51	0		
1117	Lookout Dam	09/1958	09/2005	6.910%	51	0		
1118	Lookout Dam	09/1959	09/2005	6.910%	51	0		
1119	Lookout Dam	09/1960	09/2005	6.910%	51	0		
1120	Lookout Dam	09/1961	09/2005	6.910%	52	0		
1121	Lookout Dam	09/1962	09/2005	6.910%	51	0		
1122	Lookout Dam	09/1963	09/2005	6.910%	51	0		
1123	Lookout Dam	09/1964	09/2005	6.910%	51	0		
1124	Lookout Dam	09/1965	09/2005	6.910%	51	0		
1125	Lookout Dam	09/1966	09/2005	6.910%	51	0		
1126	Lookout Dam	09/1967	09/2005	6.910%	52	0		
1127	Lookout Dam	09/1968	09/2005	6.910%	51	0		
1128	Lookout Dam	09/1969	09/2005	6.910%	51	0		
1129	Lookout Dam	09/1970	09/2005	6.910%	51	0		
1130	Lookout Dam	09/1971	09/2005	6.910%	51	0		
1131	Lookout Dam	09/1972	09/2005	6.910%	51	0		
1132	Lookout Dam	09/1973	09/2005	6.910%	52	0		
1133	Lookout Dam	09/1974	09/2005	6.910%	51	0		
1134	Lookout Dam	09/1975	09/2005	6.910%	51	0		
1135	Lookout Dam	09/1976	09/2005	6.910%	51	0		
1136	Lookout Dam	09/1977	09/2005	6.910%	51	0		
1137	Lookout Dam	09/1978	09/2005	6.910%	51	0		
1138	Lookout Dam	09/1979	09/2005	6.910%	52	0		
1139	Lookout Dam	09/1980	09/2005	6.910%	51	0		
1140	Lookout Dam	09/1981	09/2005	6.910%	51	0		
1141	Lookout Dam	09/1982	09/2005	6.910%	51	0		
1142	Lookout Dam	09/1983	09/2005	6.910%	51	0		
1143	Lookout Dam	09/1984	09/2005	10.750%	185	0		
1144	Lookout Dam	09/1985	09/2005	6.910%	52	0		
1145	Lookout Dam	09/1986	09/2005	6.910%	42	0		
1146	Lookout Dam	09/1987	09/2005	6.910%	9	0		
1147	Lookout Dam	09/1987	09/2005	8.875%	12	0		
1148	Lookout Dam	09/1988	09/2005	8.500%	46	0		
1149	Lookout Dam	09/1988	09/2005	8.500%	17	0		
1150	Lookout Dam	09/1989	09/2005	9.250%	23	0		
1151	Lookout Dam	09/1990	09/2005	8.875%	147	0		
1152	Lookout Dam	09/1990	09/2005	8.875%	4	0		
1153	Lookout Dam	09/1991	09/2005	8.750%	6	0		
1154	Lookout Dam	09/1991	09/2005	8.750%	50	0		
1155	Lookout Dam	09/1992	09/2005	8.500%	181	0		
1156	Lookout Dam	09/1992	09/2005	8.500%	4	0		
1157	Lookout Dam	09/1993	09/2005	7.875%	18	0		
1158	Lookout Dam	09/1993	09/2005	7.875%	189	0		
1159	Lookout Dam	09/1994	09/2019	7.125%	73	0		
1160	Lookout Dam	09/1995	09/2045	7.150%	80	39		
1161	Lookout Dam	09/1995	09/2045	7.150%	33	33		
1162	Lookout Dam	09/1995	09/2045	7.860%	9	0		

**TABLE 13A:
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1163	Lookout Dam	09/1995	09/2045	7.860%	15	0		
1164	Lookout Dam	09/1995	09/2045	7.860%	31	0		
1165	Lookout Dam	09/1995	09/2045	7.860%	157	0		
1166	Lookout Dam	09/2000	09/2050	6.125%	5,098	5,098		
1167	Lookout Dam	09/2003	09/2053	5.125%	135	135		
1168	Lookout Dam	09/2005	09/2055	5.125%	7,355	7,355		
1169	Lookout Dam	09/2007	09/2057	5.000%	572	572		
1170	Lookout Dam	09/2011	09/2061	3.750%	17	17		
1171	Lookout Dam	09/2012	09/2062	3.375%	294	294		
1172	Lost Creek	09/1977	09/2027	7.150%	14,293	0		
1173	Lost Creek	09/1978	09/2027	7.150%	58	0		
1174	Lost Creek	09/1979	09/2027	7.150%	60	0		
1175	Lost Creek	09/1980	09/2027	7.150%	60	0		
1176	Lost Creek	09/1981	09/2027	7.150%	60	0		
1177	Lost Creek	09/1982	09/2027	7.150%	60	0		
1178	Lost Creek	09/1983	09/2027	7.150%	60	0		
1179	Lost Creek	09/1984	09/2027	10.750%	243	0		
1180	Lost Creek	09/1985	09/2027	7.150%	12	0		
1181	Lost Creek	09/1986	09/2027	7.150%	6	0		
1182	Lost Creek	09/1986	09/2027	11.375%	5	0		
1183	Lost Creek	09/1987	09/2027	7.150%	4	0		
1184	Lost Creek	09/1987	09/2027	8.875%	3	0		
1185	Lost Creek	09/1988	09/2027	8.500%	7	0		
1186	Lost Creek	09/1989	09/2027	9.250%	9	0		
1187	Lost Creek	09/1990	09/2027	8.875%	1	0		
1188	Lost Creek	09/1991	09/2027	8.750%	31	0		
1189	Lost Creek	09/1992	09/2027	8.500%	1	0		
1190	Lost Creek	09/1992	09/2027	8.500%	1	0		
1191	Lost Creek	09/1993	09/2027	7.875%	1	0		
1192	Lost Creek	09/1993	09/2027	7.875%	14	0		
1193	Lost Creek	09/1995	09/2000	7.330%	4	0		
1194	Lost Creek	09/1995	09/2045	7.150%	94	94		
1195	Lost Creek	09/1996	09/2031	7.150%	31	0		
1196	Lost Creek	09/1996	09/2046	7.150%	24	24		
1197	Lost Creek	09/2001	09/2051	5.875%	147	147		
1198	Lost Creek	09/2011	09/2061	3.750%	7	7		
1199	Lower Granite	09/1975	09/2025	7.160%	119,237	0		
1200	Lower Granite	09/1976	09/2025	7.160%	510	0		
1201	Lower Granite	09/1977	09/2025	7.160%	510	0		
1202	Lower Granite	09/1978	09/2025	7.160%	510	0		
1203	Lower Granite	09/1978	09/2028	7.150%	40,611	0		
1204	Lower Granite	09/1979	09/2025	7.160%	510	0		
1205	Lower Granite	09/1980	09/2025	7.160%	510	0		
1206	Lower Granite	09/1981	09/2025	7.160%	510	0		
1207	Lower Granite	09/1982	09/2025	7.160%	510	0		
1208	Lower Granite	09/1983	09/2025	7.160%	510	0		
1209	Lower Granite	09/1984	09/2025	10.750%	311	0		
1210	Lower Granite	09/1985	09/2025	7.160%	328	0		
1211	Lower Granite	09/1986	09/2025	7.160%	215	0		
1212	Lower Granite	09/1986	09/2025	11.375%	4	0		
1213	Lower Granite	09/1987	09/2025	7.160%	8	0		
1214	Lower Granite	09/1987	09/2025	8.875%	60	0		
1215	Lower Granite	09/1988	09/2025	8.500%	22	0		
1216	Lower Granite	09/1988	09/2025	8.500%	95	0		
1217	Lower Granite	09/1989	09/2025	9.250%	112	0		
1218	Lower Granite	09/1990	09/2025	8.875%	392	0		
1219	Lower Granite	09/1991	09/2025	8.750%	281	0		
1220	Lower Granite	09/1991	09/2025	8.750%	6	0		
1221	Lower Granite	09/1992	09/2025	8.500%	83	0		
1222	Lower Granite	09/1992	09/2025	8.500%	121	0		
1223	Lower Granite	09/1993	09/2025	7.875%	26	0		
1224	Lower Granite	09/1993	09/2025	7.875%	3,272	0		
1225	Lower Granite	09/1994	09/2019	7.125%	38	0		
1226	Lower Granite	09/1994	09/2029	7.150%	3,543	0		
1227	Lower Granite	09/1995	09/2017	7.290%	77	0		
1228	Lower Granite	09/1995	09/2017	7.290%	388	0		
1229	Lower Granite	09/1995	09/2017	7.290%	458	0		
1230	Lower Granite	09/1995	09/2025	7.160%	96	0		
1231	Lower Granite	09/1996	09/2011	7.130%	255	0		
1232	Lower Granite	09/1996	09/2031	7.150%	206	0		
1233	Lower Granite	09/1996	09/2046	7.150%	9	9		
1234	Lower Granite	09/1996	09/2046	7.150%	625	625		
1235	Lower Granite	09/1997	09/2047	7.150%	677	677		
1236	Lower Granite	09/1999	09/2049	5.375%	856	856		
1237	Lower Granite	09/2001	09/2051	5.875%	2,025	2,025		
1238	Lower Granite	09/2002	09/2052	5.500%	1,275	1,275		
1239	Lower Granite	09/2003	09/2053	5.125%	42	42		
1240	Lower Granite	09/2005	09/2055	5.125%	393	393		
1241	Lower Granite	09/2008	09/2058	4.875%	24	24		
1242	Lower Granite	09/2009	09/2059	4.375%	5,669	5,669		
1243	Lower Granite	09/2010	09/2060	4.250%	1,156	1,156		
1244	Lower Granite	09/2011	09/2061	3.750%	8	8		
1245	Lower Granite	09/2014	09/2064	3.875%	2,644	2,644		

TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
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(\$000s) (FY 2019)

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1246	Lower Granite	09/2015	09/2065	3.250%	1,597	1,597		
1247	Lower Granite	09/2016	09/2066	3.000%	1,878	1,878		
1248	Lower Monument	09/1969	09/2019	7.270%	26,974	0		
1249	Lower Monument	09/1970	09/2020	7.250%	51,218	0		
1250	Lower Monument	09/1971	09/2020	7.250%	214	0		
1251	Lower Monument	09/1972	09/2020	7.250%	214	0		
1252	Lower Monument	09/1973	09/2020	7.250%	214	0		
1253	Lower Monument	09/1974	09/2020	7.250%	214	0		
1254	Lower Monument	09/1975	09/2020	7.250%	214	0		
1255	Lower Monument	09/1976	09/2020	7.250%	214	0		
1256	Lower Monument	09/1977	09/2020	7.250%	214	0		
1257	Lower Monument	09/1978	09/2020	7.250%	214	0		
1258	Lower Monument	09/1979	09/2020	7.250%	214	0		
1259	Lower Monument	09/1979	09/2029	7.150%	40,669	0		
1260	Lower Monument	09/1980	09/2020	7.250%	214	0		
1261	Lower Monument	09/1981	09/2020	7.250%	214	0		
1262	Lower Monument	09/1982	09/2020	7.250%	214	0		
1263	Lower Monument	09/1983	09/2020	7.250%	214	0		
1264	Lower Monument	09/1985	09/2020	7.250%	8	0		
1265	Lower Monument	09/1985	09/2029	7.150%	256	0		
1266	Lower Monument	09/1986	09/2020	7.250%	132	0		
1267	Lower Monument	09/1987	09/2020	7.250%	3	0		
1268	Lower Monument	09/1987	09/2020	8.875%	50	0		
1269	Lower Monument	09/1988	09/2020	8.500%	1	0		
1270	Lower Monument	09/1988	09/2020	8.500%	58	0		
1271	Lower Monument	09/1989	09/2020	9.250%	93	0		
1272	Lower Monument	09/1990	09/2020	8.875%	358	0		
1273	Lower Monument	09/1991	09/2020	8.750%	594	0		
1274	Lower Monument	09/1992	09/2020	8.500%	4,484	0		
1275	Lower Monument	09/1993	09/2020	7.875%	24	0		
1276	Lower Monument	09/1993	09/2020	7.875%	2,175	0		
1277	Lower Monument	09/1994	09/2019	7.125%	107	0		
1278	Lower Monument	09/1994	09/2029	7.125%	2,167	0		
1279	Lower Monument	09/1995	09/2000	7.330%	6	0		
1280	Lower Monument	09/1995	09/2045	7.150%	41	41		
1281	Lower Monument	09/1995	09/2045	7.150%	99	99		
1282	Lower Monument	09/1995	09/2045	7.150%	624	624		
1283	Lower Monument	09/1995	09/2045	7.150%	1,122	1,122		
1284	Lower Monument	09/1996	09/2016	7.290%	668	0		
1285	Lower Monument	09/1996	09/2021	7.230%	37	0		
1286	Lower Monument	09/1996	09/2021	7.230%	51	0		
1287	Lower Monument	09/1996	09/2036	7.150%	264	264		
1288	Lower Monument	09/1996	09/2046	7.150%	10	10		
1289	Lower Monument	09/2001	09/2051	5.875%	3,301	3,301		
1290	Lower Monument	09/2002	09/2052	5.500%	29	29		
1291	Lower Monument	09/2003	09/2053	5.125%	22	22		
1292	Lower Monument	09/2004	09/2054	5.375%	3,423	3,423		
1293	Lower Monument	09/2005	09/2055	5.125%	527	527		
1294	Lower Monument	09/2006	09/2056	4.500%	285	285		
1295	Lower Monument	09/2008	09/2058	4.875%	9	9		
1296	Lower Monument	09/2009	09/2059	4.375%	2,332	2,332		
1297	Lower Monument	09/2012	09/2062	3.375%	89	89		
1298	Lower Monument	09/2014	09/2064	3.875%	1,430	1,430		
1299	Lower Monument	09/2016	09/2066	3.000%	155	155		
1300	Lower Snake Fish and Wildlife	09/1983	09/2033	7.150%	30,488	9,472		
1301	Lower Snake Fish and Wildlife	09/1985	09/2035	7.150%	47,921	47,921		
1302	Lower Snake Fish and Wildlife	09/1987	09/2037	7.150%	72,536	72,536		
1303	Lower Snake Fish and Wildlife	09/1988	09/2038	7.150%	805	805		
1304	Lower Snake Fish and Wildlife	09/1990	09/2040	7.150%	1,557	1,557		
1305	Lower Snake Fish and Wildlife	09/1991	09/2041	7.150%	4,411	4,411		
1306	Lower Snake Fish and Wildlife	09/1993	09/2043	7.150%	71,632	71,632		
1307	Lower Snake Fish and Wildlife	09/1994	09/2044	7.150%	4,722	4,722		
1308	Lower Snake Fish and Wildlife	09/1996	09/2046	7.150%	12,085	12,085		
1309	Lower Snake Fish and Wildlife	09/1997	09/2047	7.150%	2,173	2,173		
1310	Lower Snake Fish and Wildlife	09/1999	09/2049	5.375%	7	7		
1311	Lower Snake Fish and Wildlife	09/2000	09/2050	6.125%	1,529	1,529		
1312	Lower Snake Fish and Wildlife	09/2001	09/2051	5.875%	325	325		
1313	Lower Snake Fish and Wildlife	09/2002	09/2052	5.500%	890	890		
1314	Lower Snake Fish and Wildlife	09/2003	09/2053	5.125%	98	98		
1315	Lower Snake Fish and Wildlife	09/2004	09/2054	5.375%	230	230		
1316	Lower Snake Fish and Wildlife	09/2005	09/2055	5.125%	4	4		
1317	Lower Snake Fish and Wildlife	09/2006	09/2056	4.500%	379	379		
1318	Lower Snake Fish and Wildlife	09/2008	09/2058	4.875%	74	74		
1319	Lower Snake Fish and Wildlife	09/2009	09/2059	4.375%	1,540	1,540		
1320	Lower Snake Fish and Wildlife	09/2010	09/2060	4.250%	6	6		
1321	Lower Snake Fish and Wildlife	09/2011	09/2061	3.750%	122	122		
1322	Lower Snake Fish and Wildlife	09/2014	09/2064	3.875%	222	222		
1323	Lower Snake Fish and Wildlife	09/2016	09/2066	3.000%	1,256	1,256		
1324	McNary	09/1954	09/2004	6.880%	80,256	0		
1325	McNary	09/1955	09/2005	6.910%	53,493	0		
1326	McNary	09/1956	09/2006	6.950%	38,748	0		
1327	McNary	09/1957	09/2007	6.980%	24,985	0		
1328	McNary	09/1958	09/2007	6.980%	468	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1329	McNary	09/1959	09/2007	6.980%	468	0		
1330	McNary	09/1960	09/2007	6.980%	468	0		
1331	McNary	09/1961	09/2007	6.980%	468	0		
1332	McNary	09/1962	09/2007	6.980%	467	0		
1333	McNary	09/1963	09/2007	6.980%	468	0		
1334	McNary	09/1964	09/2007	6.980%	468	0		
1335	McNary	09/1965	09/2007	6.980%	468	0		
1336	McNary	09/1966	09/2007	6.980%	468	0		
1337	McNary	09/1967	09/2007	6.980%	467	0		
1338	McNary	09/1968	09/2007	6.980%	468	0		
1339	McNary	09/1969	09/2007	6.980%	468	0		
1340	McNary	09/1970	09/2007	6.980%	468	0		
1341	McNary	09/1971	09/2007	6.980%	468	0		
1342	McNary	09/1972	09/2007	6.980%	468	0		
1343	McNary	09/1973	09/2007	6.980%	467	0		
1344	McNary	09/1974	09/2007	6.980%	468	0		
1345	McNary	09/1975	09/2007	6.980%	468	0		
1346	McNary	09/1976	09/2007	6.980%	468	0		
1347	McNary	09/1977	09/2007	6.980%	467	0		
1348	McNary	09/1978	09/2007	6.980%	468	0		
1349	McNary	09/1979	09/2007	6.980%	468	0		
1350	McNary	09/1980	09/2007	6.980%	468	0		
1351	McNary	09/1981	09/2007	6.980%	468	0		
1352	McNary	09/1982	09/2007	6.980%	467	0		
1353	McNary	09/1983	09/2007	6.980%	468	0		
1354	McNary	09/1985	09/2007	6.980%	557	0		
1355	McNary	09/1986	09/2007	6.980%	454	0		
1356	McNary	09/1987	09/2007	6.980%	24	0		
1357	McNary	09/1995	09/2010	7.090%	509	0		
1358	McNary	09/1995	09/2045	7.150%	16	16		
1359	McNary	09/1996	09/2006	6.950%	778	0		
1360	McNary	09/1996	09/2011	7.130%	3	0		
1361	McNary	09/1996	09/2026	7.150%	74	0		
1362	McNary	09/1996	09/2026	7.150%	277	0		
1363	McNary	09/1996	09/2046	7.150%	619	619		
1364	McNary	09/1997	09/2032	7.150%	30	0		
1365	McNary	09/2001	09/2051	5.875%	1,046	1,046		
1366	McNary	09/2003	09/2053	5.125%	97	97		
1367	McNary	09/2004	09/2054	5.375%	6,138	6,138		
1368	McNary	09/2005	09/2055	5.125%	550	550		
1369	McNary	09/2006	09/2056	4.500%	4,080	4,080		
1370	McNary	09/2008	09/2058	4.875%	215	215		
1371	McNary	09/2011	09/2061	3.750%	565	565		
1372	McNary	09/2012	09/2062	3.375%	11	11		
1373	McNary	09/2013	09/2063	2.875%	1,000	1,000		
1374	McNary	09/2014	09/2064	3.875%	759	759		
1375	Minidoka/Palisades	09/1909	09/1959	3.000%	854	0		
1376	Minidoka/Palisades	09/1909	09/1959	3.000%	226	0		
1377	Minidoka/Palisades	09/1910	09/1960	3.000%	1,709	0		
1378	Minidoka/Palisades	09/1910	09/1960	3.000%	451	0		
1379	Minidoka/Palisades	09/1911	09/1961	3.000%	1,709	0		
1380	Minidoka/Palisades	09/1911	09/1961	3.000%	451	0		
1381	Minidoka/Palisades	09/1927	09/1977	3.000%	854	0		
1382	Minidoka/Palisades	09/1927	09/1977	3.000%	226	0		
1383	Minidoka/Palisades	09/1942	09/1992	3.000%	854	0		
1384	Minidoka/Palisades	09/1942	09/1992	3.000%	226	0		
1385	Minidoka/Palisades	09/1957	09/2007	3.000%	2,561	0		
1386	Minidoka/Palisades	09/1957	09/2007	3.000%	677	0		
1387	Minidoka/Palisades	09/1958	09/2008	3.000%	854	0		
1388	Minidoka/Palisades	09/1958	09/2008	3.000%	226	0		
1389	Minidoka/Palisades	09/1959	09/2008	3.000%	108	0		
1390	Minidoka/Palisades	09/1959	09/2008	3.000%	28	0		
1391	Minidoka/Palisades	09/1960	09/2008	3.000%	108	0		
1392	Minidoka/Palisades	09/1960	09/2008	3.000%	29	0		
1393	Minidoka/Palisades	09/1961	09/2008	3.000%	108	0		
1394	Minidoka/Palisades	09/1961	09/2008	3.000%	29	0		
1395	Minidoka/Palisades	09/1962	09/2008	3.000%	108	0		
1396	Minidoka/Palisades	09/1962	09/2008	3.000%	28	0		
1397	Minidoka/Palisades	09/1963	09/2008	3.000%	108	0		
1398	Minidoka/Palisades	09/1963	09/2008	3.000%	29	0		
1399	Minidoka/Palisades	09/1964	09/2008	3.000%	108	0		
1400	Minidoka/Palisades	09/1964	09/2008	3.000%	28	0		
1401	Minidoka/Palisades	09/1965	09/2008	3.000%	108	0		
1402	Minidoka/Palisades	09/1965	09/2008	3.000%	29	0		
1403	Minidoka/Palisades	09/1966	09/2008	3.000%	108	0		
1404	Minidoka/Palisades	09/1966	09/2008	3.000%	29	0		
1405	Minidoka/Palisades	09/1967	09/2008	3.000%	108	0		
1406	Minidoka/Palisades	09/1967	09/2008	3.000%	28	0		
1407	Minidoka/Palisades	09/1968	09/2008	3.000%	108	0		
1408	Minidoka/Palisades	09/1968	09/2008	3.000%	29	0		
1409	Minidoka/Palisades	09/1969	09/2008	3.000%	3	0		
1410	Minidoka/Palisades	09/1969	09/2008	3.000%	28	0		
1411	Minidoka/Palisades	09/1970	09/2008	3.000%	108	0		

**TABLE 13A:
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(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1412	Minidoka/Palisades	09/1970	09/2008	3.000%	29	0		
1413	Minidoka/Palisades	09/1971	09/2008	3.000%	108	0		
1414	Minidoka/Palisades	09/1971	09/2008	3.000%	29	0		
1415	Minidoka/Palisades	09/1972	09/2008	3.000%	108	0		
1416	Minidoka/Palisades	09/1972	09/2008	3.000%	28	0		
1417	Minidoka/Palisades	09/1973	09/2008	3.000%	108	0		
1418	Minidoka/Palisades	09/1973	09/2008	3.000%	29	0		
1419	Minidoka/Palisades	09/1974	09/2008	3.000%	108	0		
1420	Minidoka/Palisades	09/1974	09/2008	3.000%	28	0		
1421	Minidoka/Palisades	09/1975	09/2008	3.000%	108	0		
1422	Minidoka/Palisades	09/1975	09/2008	3.000%	29	0		
1423	Minidoka/Palisades	09/1976	09/2008	3.000%	108	0		
1424	Minidoka/Palisades	09/1976	09/2008	3.000%	29	0		
1425	Minidoka/Palisades	09/1977	09/2008	7.020%	83	0		
1426	Minidoka/Palisades	09/1977	09/2008	7.020%	28	0		
1427	Minidoka/Palisades	09/1978	09/2008	7.020%	75	0		
1428	Minidoka/Palisades	09/1978	09/2008	7.020%	20	0		
1429	Minidoka/Palisades	09/1979	09/2008	7.020%	75	0		
1430	Minidoka/Palisades	09/1979	09/2008	7.020%	19	0		
1431	Minidoka/Palisades	09/1980	09/2008	7.020%	75	0		
1432	Minidoka/Palisades	09/1980	09/2008	7.020%	20	0		
1433	Minidoka/Palisades	09/1981	09/2008	7.020%	75	0		
1434	Minidoka/Palisades	09/1981	09/2008	7.020%	20	0		
1435	Minidoka/Palisades	09/1982	09/2008	7.020%	75	0		
1436	Minidoka/Palisades	09/1982	09/2008	7.020%	19	0		
1437	Minidoka/Palisades	09/1983	09/2008	7.020%	65	0		
1438	Minidoka/Palisades	09/1983	09/2008	7.020%	20	0		
1439	Minidoka/Palisades	09/1984	09/2008	10.075%	44	0		
1440	Minidoka/Palisades	09/1984	09/2008	10.075%	11	0		
1441	Minidoka/Palisades	09/1985	09/2008	7.020%	21	0		
1442	Minidoka/Palisades	09/1986	09/2008	7.020%	21	0		
1443	Minidoka/Palisades	09/1986	09/2008	11.375%	48	0		
1444	Minidoka/Palisades	09/1987	09/2008	7.020%	16	0		
1445	Minidoka/Palisades	09/1988	09/2008	8.500%	31	0		
1446	Minidoka/Palisades	09/1989	09/2008	9.250%	20	0		
1447	Minidoka/Palisades	09/1990	09/2008	8.875%	33	0		
1448	Minidoka/Palisades	09/1991	09/2008	8.750%	62	0		
1449	Minidoka/Palisades	09/1991	09/2008	8.750%	11	0		
1450	Minidoka/Palisades	09/1991	09/2008	8.750%	32	0		
1451	Minidoka/Palisades	09/1992	09/2008	8.500%	6	0		
1452	Minidoka/Palisades	09/1994	09/2029	7.125%	351	0		
1453	Minidoka/Palisades	09/1995	09/2000	7.330%	6	0		
1454	Minidoka/Palisades	09/1995	09/2010	7.890%	40	0		
1455	Minidoka/Palisades	09/1996	09/2011	7.130%	54	0		
1456	Minidoka/Palisades	09/1997	09/2007	6.950%	66	0		
1457	Minidoka/Palisades	09/1997	09/2047	7.150%	50,911	50,911		
1458	Minidoka/Palisades	09/2001	09/2051	5.875%	42	42		
1459	Minidoka/Palisades	09/2012	09/2062	3.375%	7	7		
1460	Minidoka/Palisades	09/2015	09/2065	3.250%	19,237	19,237		
1461	Minidoka/Palisades	09/2016	09/2066	3.000%	206	206		
1462	RRP - Green Springs	09/2001	09/2051	5.875%	11,145	11,145		
1463	RRP - Green Springs	09/2012	09/2062	3.375%	2	2		
1464	RRP - Green Springs	09/2013	09/2063	2.875%	1	1		
1465	The Dalles	09/1957	09/2007	2.500%	15,908	0		
1466	The Dalles	09/1958	09/2008	7.020%	45,837	0		
1467	The Dalles	09/1959	09/2009	7.060%	40,415	0		
1468	The Dalles	09/1960	09/2010	7.090%	39,179	0		
1469	The Dalles	09/1961	09/2011	7.130%	9,492	0		
1470	The Dalles	09/1962	09/2011	7.130%	56	0		
1471	The Dalles	09/1963	09/2011	7.130%	57	0		
1472	The Dalles	09/1964	09/2011	7.130%	57	0		
1473	The Dalles	09/1965	09/2011	7.130%	56	0		
1474	The Dalles	09/1966	09/2011	7.130%	57	0		
1475	The Dalles	09/1967	09/2011	7.130%	57	0		
1476	The Dalles	09/1968	09/2011	7.130%	56	0		
1477	The Dalles	09/1969	09/2011	7.130%	57	0		
1478	The Dalles	09/1970	09/2011	7.130%	57	0		
1479	The Dalles	09/1971	09/2011	7.130%	56	0		
1480	The Dalles	09/1972	09/2011	7.130%	57	0		
1481	The Dalles	09/1973	09/2011	7.130%	57	0		
1482	The Dalles	09/1973	09/2023	7.190%	21,983	0		
1483	The Dalles	09/1974	09/2011	7.130%	56	0		
1484	The Dalles	09/1974	09/2024	7.170%	7,268	0		
1485	The Dalles	09/1975	09/2011	7.130%	57	0		
1486	The Dalles	09/1976	09/2011	7.130%	57	0		
1487	The Dalles	09/1977	09/2011	7.130%	56	0		
1488	The Dalles	09/1978	09/2011	7.130%	57	0		
1489	The Dalles	09/1979	09/2011	7.130%	57	0		
1490	The Dalles	09/1980	09/2011	7.130%	56	0		
1491	The Dalles	09/1981	09/2011	7.130%	57	0		
1492	The Dalles	09/1982	09/2011	7.130%	57	0		
1493	The Dalles	09/1983	09/2011	7.130%	56	0		
1494	The Dalles	09/1984	09/2011	10.750%	961	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1495	The Dalles	09/1985	09/2011	7.130%	95	0		
1496	The Dalles	09/1985	09/2011	12.375%	280	0		
1497	The Dalles	09/1986	09/2011	7.130%	95	0		
1498	The Dalles	09/1986	09/2011	11.375%	4	0		
1499	The Dalles	09/1987	09/2011	7.130%	1,417	0		
1500	The Dalles	09/1987	09/2011	8.875%	81	0		
1501	The Dalles	09/1988	09/2011	8.500%	685	0		
1502	The Dalles	09/1988	09/2011	8.500%	1	0		
1503	The Dalles	09/1989	09/2011	9.250%	898	0		
1504	The Dalles	09/1990	09/2011	8.875%	319	0		
1505	The Dalles	09/1990	09/2011	8.875%	745	0		
1506	The Dalles	09/1991	09/2011	8.750%	89	0		
1507	The Dalles	09/1991	09/2011	8.750%	2,452	0		
1508	The Dalles	09/1992	09/2011	8.500%	57	0		
1509	The Dalles	09/1992	09/2011	8.500%	130	0		
1510	The Dalles	09/1993	09/2011	7.875%	2,028	0		
1511	The Dalles	09/1993	09/2011	7.875%	2,929	0		
1512	The Dalles	09/1994	09/2029	7.125%	1,425	0		
1513	The Dalles	09/1996	09/2008	7.020%	196	0		
1514	The Dalles	09/1996	09/2011	7.130%	457	0		
1515	The Dalles	09/1996	09/2046	7.150%	1,991	1,991		
1516	The Dalles	09/2000	09/2050	6.125%	2,588	2,588		
1517	The Dalles	09/2002	09/2052	5.500%	1,226	1,226		
1518	The Dalles	09/2004	09/2054	5.375%	182	182		
1519	The Dalles	09/2005	09/2055	5.125%	36,019	36,019		
1520	The Dalles	09/2006	09/2056	4.500%	2,030	2,030		
1521	The Dalles	09/2007	09/2057	5.000%	140	140		
1522	The Dalles	09/2008	09/2058	4.875%	1,651	1,651		
1523	The Dalles	09/2015	09/2065	3.250%	302	302		
1524	The Dalles	09/2016	09/2066	3.000%	4	4		
1525	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	1,068	0		
1526	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	481	0		
1527	Yakima Chandler/Kenniwick	09/1959	09/2022	7.210%	1	0		
1528	Yakima Chandler/Kenniwick	09/1960	09/2022	7.210%	1	0		
1529	Yakima Chandler/Kenniwick	09/1961	09/2022	7.210%	1	0		
1530	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	35	0		
1531	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	10	0		
1532	Yakima Chandler/Kenniwick	09/1985	09/2022	12.375%	357	0		
1533	Yakima Chandler/Kenniwick	09/1986	09/2022	7.210%	439	0		
1534	Yakima Chandler/Kenniwick	09/1986	09/2022	11.375%	7	0		
1535	Yakima Chandler/Kenniwick	09/1987	09/2022	8.875%	126	0		
1536	Yakima Chandler/Kenniwick	09/1989	09/2022	9.250%	18	0		
1537	Yakima Chandler/Kenniwick	09/1990	09/2022	8.875%	40	0		
1538	Yakima Chandler/Kenniwick	09/1991	09/2022	8.750%	109	0		
1539	Yakima Chandler/Kenniwick	09/2005	09/2055	5.125%	833	833		
1540	Yakima Chandler/Kenniwick	09/2009	09/2059	4.375%	15	15		
1541	Yakima Roza	09/1958	09/2008	7.020%	1,194	0		
1542	Yakima Roza	09/1958	09/2008	7.020%	383	0		
1543	Yakima Roza	09/1984	09/2008	10.750%	5	0		
1544	Yakima Roza	09/1984	09/2008	10.750%	17	0		
1545	Yakima Roza	09/1985	09/2008	7.020%	69	0		
1546	Yakima Roza	09/1985	09/2008	12.375%	5	0		
1547	Yakima Roza	09/1986	09/2008	7.020%	6	0		
1548	Yakima Roza	09/1987	09/2008	7.020%	2	0		
1549	Yakima Roza	09/1987	09/2008	8.875%	9	0		
1550	Yakima Roza	09/2001	09/2051	5.875%	15	14		
1551	Bureau Direct	05/1995	05/2015	7.500%	35,000	0		
1552	Bureau Direct	05/1997	05/2000	6.500%	50,000	0		
1553	Bureau Direct	04/1998	05/2008	6.000%	25,000	0		
1554	Bureau Direct	09/1999	09/2004	6.400%	20,000	0		
1555	Bureau Direct	04/2000	04/2003	6.850%	40,000	0		
1556	Bureau Direct	09/2000	09/2005	6.700%	20,000	0		
1557	Bureau Direct	06/2001	06/2004	4.750%	50,000	0		
1558	Bureau Direct	03/2002	03/2005	4.600%	30,000	0		
1559	Bureau Direct	09/2002	09/2006	3.050%	20,000	0		
1560	Bureau Direct	12/2002	12/2006	3.050%	40,000	0		
1561	Bureau Direct	04/2003	04/2006	2.400%	40,000	0		
1562	Bureau Direct	04/2003	04/2006	2.400%	25,000	0		
1563	Bureau Direct	07/2003	07/2006	2.300%	30,000	0		
1564	Bureau Direct	09/2003	09/2006	2.500%	25,000	0		
1565	Bureau Direct	01/2004	01/2007	2.500%	25,000	0		
1566	Bureau Direct	04/2004	04/2007	2.950%	35,000	0		
1567	Bureau Direct	07/2004	07/2007	3.450%	25,000	0		
1568	Bureau Direct	09/2004	09/2007	3.100%	30,000	0		
1569	Bureau Direct	11/2004	11/2007	3.500%	20,000	0		
1570	Bureau Direct	01/2005	01/2008	3.600%	20,000	0		
1571	Bureau Direct	06/2005	06/2008	3.950%	30,000	0		
1572	Bureau Direct	09/2005	09/2008	4.250%	25,000	0		
1573	Bureau Direct	03/2006	03/2009	5.050%	25,000	0		
1574	Bureau Direct	07/2006	07/2009	5.350%	45,000	0		
1575	Bureau Direct	09/2006	09/2009	4.950%	15,000	0		
1576	Bureau Direct	01/2007	01/2010	5.100%	35,000	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1577	Bureau Direct	03/2007	03/2010	4.800%	30,000	0		
1578	Bureau Direct	06/2007	06/2010	5.350%	30,000	0		
1579	Bureau Direct	01/2008	01/2011	2.850%	35,000	0		
1580	Bureau Direct	01/2008	01/2011	2.850%	20,000	0		
1581	Bureau Direct	05/2008	05/2011	3.358%	35,000	0		
1582	Bureau Direct	05/2008	05/2011	3.358%	25,000	0		
1583	Bureau Direct	06/2008	06/2012	3.974%	30,000	0		
1584	Bureau Direct	07/2008	07/2012	3.913%	35,000	0		
1585	Bureau Direct	09/2008	09/2012	3.444%	35,000	0		
1586	Bureau Direct	01/2009	01/2021	3.999%	25,000	25,000		
1587	Bureau Direct	04/2009	04/2023	4.391%	25,000	25,000	04/2028	3.64%
1588	Bureau Direct	06/2009	06/2039	5.192%	25,000	25,000		
1589	Bureau Direct	09/2009	09/2019	3.699%	25,000	25,000	09/2029	3.71%
1590	Bureau Direct	10/2009	10/2018	3.719%	24,000	24,000		
1591	Bureau Direct	10/2009	10/2019	3.842%	20,000	20,000		
1592	Bureau Direct	11/2009	11/2019	3.637%	7,000	7,000		
1593	Bureau Direct	12/2009	12/2019	4.194%	13,000	13,000		
1594	Bureau Direct	01/2010	01/2019	3.714%	10,000	10,000	01/2029	3.71%
1595	Bureau Direct	02/2010	02/2019	0.165%	10,000	0		
1596	Bureau Direct	03/2010	03/2020	4.083%	30,000	30,000		
1597	Bureau Direct	04/2010	04/2020	3.973%	18,000	18,000		
1598	Bureau Direct	05/2010	05/2020	3.574%	15,000	15,000		
1599	Bureau Direct	06/2010	06/2020	3.243%	10,000	10,000	06/2030	4.06%
1600	Bureau Direct	06/2010	06/2020	3.243%	30,000	30,000	06/2030	4.06%
1601	Bureau Direct	07/2010	07/2020	3.118%	17,000	17,000		
1602	Bureau Direct	08/2010	08/2020	0.165%	5,000	0		
1603	Bureau Direct	09/2010	09/2021	2.883%	22,000	22,000		
1604	Bureau Direct	10/2010	10/2034	4.211%	20,000	20,000		
1605	Bureau Direct	01/2011	09/2011	0.244%	20,000	0		
1606	Bureau Direct	01/2011	09/2011	0.244%	35,000	0		
1607	Bureau Direct	01/2011	01/2039	5.040%	35,000	35,000		
1608	Bureau Direct	02/2011	02/2040	4.995%	50,000	50,000		
1609	Bureau Direct	05/2011	09/2011	0.076%	35,000	0		
1610	Bureau Direct	05/2011	09/2011	0.076%	25,000	0		
1611	Bureau Direct	06/2011	06/2036	4.629%	30,000	30,000		
1612	Bureau Direct	06/2011	06/2038	4.700%	30,000	30,000		
1613	Bureau Direct	08/2011	08/2037	4.208%	30,000	30,000		
1614	Bureau Direct	09/2011	07/2041	3.825%	30,000	0		
1615	Bureau Direct	12/2011	12/2038	3.880%	35,000	0		
1616	Bureau Direct	01/2012	01/2038	3.893%	15,000	0		
1617	Bureau Direct	02/2012	02/2034	0.697%	55,000	55,000		
1618	Bureau Direct	06/2012	06/2041	3.666%	50,000	0		
1619	Bureau Direct	06/2012	09/2012	0.119%	30,000	0		
1620	Bureau Direct	08/2012	07/2042	3.834%	44,000	0		
1621	Bureau Direct	09/2012	09/2013	0.174%	35,000	0		
1622	Bureau Direct	09/2012	09/2042	3.668%	25,000	0		
1623	Bureau Direct	01/2013	01/2043	6.194%	70,000	0		
1624	Bureau Direct	02/2013	02/2043	5.993%	18,000	0		
1625	Bureau Direct	03/2013	03/2043	5.958%	15,000	0		
1626	Bureau Direct	04/2013	04/2043	5.633%	15,000	0		
1627	Bureau Direct	05/2013	05/2043	6.192%	18,000	0		
1628	Bureau Direct	06/2013	01/2039	0.674%	35,000	35,000		
1629	Bureau Direct	06/2013	06/2043	6.938%	21,000	0		
1630	Bureau Direct	07/2013	07/2034	7.164%	25,000	0		
1631	Bureau Direct	08/2013	08/2034	7.413%	15,000	0		
1632	Bureau Direct	11/2013	09/2014	0.140%	77,000	0		
1633	Bureau Direct	11/2013	09/2021	2.812%	50,000	50,000		
1634	Bureau Direct	11/2013	09/2022	3.125%	19,000	19,000		
1635	Bureau Direct	11/2013	09/2020	2.473%	51,000	51,000	09/2030	4.06%
1636	Bureau Direct	01/2014	12/2018	1.943%	43,000	43,000		
1637	Bureau Direct	01/2014	12/2018	1.943%	38,000	38,000		
1638	Bureau Direct	01/2014	12/2018	1.943%	21,000	21,000	12/2028	3.71%
1639	Bureau Direct	01/2014	12/2018	1.943%	26,000	26,000	12/2028	3.71%
1640	Bureau Direct	01/2014	12/2018	1.943%	14,000	14,000	12/2028	3.71%
1641	Bureau Direct	09/2014	05/2032	0.713%	16,000	16,000		
1642	Bureau Direct	09/2014	05/2032	0.713%	10,000	10,000		
1643	Bureau Direct	09/2014	06/2033	0.732%	11,000	11,000		
1644	Bureau Direct	09/2014	06/2033	0.732%	12,000	12,000		
1645	Bureau Direct	09/2014	07/2033	0.674%	15,000	15,000		
1646	Bureau Direct	09/2015	09/2033	3.134%	10,000	10,000		
1647	Bureau Direct	04/2016	04/2031	2.661%	17,000	17,000		
1648	Bureau Direct	07/2016	07/2030	2.145%	12,000	12,000		
1649	Bureau Direct	07/2016	07/2030	2.145%	25,000	25,000		
1650	Conservation	09/1983	09/2003	12.200%	140,000	0		
1651	Conservation	09/1984	09/2004	13.050%	150,000	0		
1652	Conservation	09/1985	09/1990	10.150%	50,000	0		
1653	Conservation	03/1986	03/1991	7.800%	50,000	0		
1654	Conservation	03/1986	03/1996	8.150%	50,000	0		
1655	Conservation	04/1987	04/2007	9.300%	75,000	0		
1656	Conservation	06/1987	06/1992	8.350%	50,000	0		
1657	Conservation	04/1988	04/2008	9.900%	90,000	0		
1658	Conservation	07/1989	07/2009	8.550%	40,000	0		

**TABLE 13A:
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	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1659	Conservation	09/1989	09/1995	8.600%	66,000	0		
1660	Conservation	09/1989	09/2002	8.650%	66,000	0		
1661	Conservation	07/1992	07/1997	5.800%	80,200	0		
1662	Conservation	07/1992	07/2007	7.140%	100,000	0		
1663	Conservation	10/1992	10/2012	8.050%	50,000	0		
1664	Conservation	02/1993	02/2013	7.400%	50,000	0		
1665	Conservation	08/1993	08/2013	6.750%	40,000	0		
1666	Conservation	01/1994	01/2014	6.750%	50,000	0		
1667	Conservation	05/1994	05/1998	7.100%	50,000	0		
1668	Conservation	05/1995	05/2015	7.500%	85,000	0		
1669	Conservation	01/1996	01/2011	6.700%	30,000	0		
1670	Conservation	11/1996	11/2016	7.200%	40,000	0		
1671	Conservation	05/1998	05/2009	6.000%	37,700	0		
1672	Conservation	09/1998	09/2008	5.300%	104,300	0		
1673	Conservation	09/1998	09/2013	5.600%	52,800	0		
1674	Conservation	07/2000	07/2003	6.950%	32,000	0		
1675	Conservation	06/2002	06/2005	3.750%	40,000	0		
1676	Conservation	01/2004	01/2008	2.950%	30,000	0		
1677	Conservation	03/2006	03/2009	5.050%	20,000	0		
1678	Conservation	06/2007	06/2010	5.350%	20,000	0		
1679	Conservation	09/2008	09/2013	3.701%	10,000	0		
1680	Conservation	09/2009	09/2014	2.746%	15,000	0		
1681	Conservation	01/2010	01/2015	2.609%	15,000	0		
1682	Conservation	04/2010	04/2015	2.677%	20,000	0		
1683	Conservation	08/2010	08/2015	1.619%	15,000	0		
1684	Conservation	09/2010	09/2015	1.534%	10,000	0		
1685	Conservation	01/2011	01/2023	4.046%	40,000	40,000		
1686	Conservation	04/2011	04/2023	3.932%	35,000	35,000		
1687	Conservation	08/2011	08/2023	3.206%	40,000	40,000		
1688	Conservation	10/2011	08/2012	0.204%	55,000	0		
1689	Conservation	12/2011	12/2037	0.189%	55,000	0		
1690	Conservation	05/2012	09/2015	0.676%	30,000	0		
1691	Conservation	06/2012	09/2015	0.671%	15,000	0		
1692	Conservation	08/2012	08/2024	2.788%	15,000	0		
1693	Conservation	11/2012	11/2016	0.630%	20,000	0		
1694	Conservation	01/2013	01/2018	1.107%	9,000	9,000		
1695	Conservation	03/2013	03/2025	4.992%	10,000	0		
1696	Conservation	04/2013	04/2025	4.553%	12,000	0		
1697	Conservation	08/2013	08/2025	6.973%	5,000	0		
1698	Conservation	10/2013	10/2025	3.568%	34,000	34,000		
1699	Conservation	11/2013	09/2023	3.375%	27,000	27,000		
1700	Conservation	12/2013	12/2021	3.142%	6,000	6,000		
1701	Conservation	12/2013	12/2023	0.732%	55,000	55,000		
1702	Conservation	01/2014	01/2026	3.621%	5,000	5,000		
1703	Conservation	04/2014	06/2025	0.732%	30,000	30,000		
1704	Conservation	05/2014	04/2024	0.526%	15,000	15,000		
1705	Conservation	05/2014	04/2025	0.526%	3,000	3,000		
1706	Conservation	06/2014	10/2024	0.526%	5,000	5,000		
1707	Conservation	07/2014	07/2025	0.674%	12,000	12,000		
1708	Conservation	08/2014	09/2025	0.947%	4,000	4,000		
1709	Conservation	10/2014	12/2024	0.732%	10,000	10,000		
1710	Conservation	11/2014	03/2027	0.947%	6,000	6,000		
1711	Conservation	12/2014	12/2023	2.403%	7,000	7,000		
1712	Conservation	01/2015	09/2015	0.204%	15,000	0		
1713	Conservation	01/2015	01/2024	1.908%	7,000	7,000		
1714	Conservation	02/2015	02/2024	2.251%	8,000	8,000		
1715	Conservation	03/2015	03/2025	2.295%	5,000	5,000		
1716	Conservation	04/2015	04/2024	2.269%	5,000	5,000		
1717	Conservation	05/2015	05/2021	1.898%	5,000	5,000		
1718	Conservation	07/2015	07/2021	2.067%	14,000	14,000		
1719	Conservation	08/2015	08/2022	2.233%	6,000	6,000		
1720	Conservation	09/2015	09/2022	2.062%	4,000	4,000		
1721	Conservation	10/2015	10/2027	0.732%	25,000	25,000		
1722	Conservation	11/2016	04/2017	0.684%	20,000	0		
1723	Conservation	04/2017	01/2018	1.051%	20,000	20,000		
1724	Construction (AS)	10/1992	10/2032	8.350%	38	0		
1725	Construction (AS)	07/1995	07/2025	7.700%	67	0		
1726	Construction (AS)	01/1996	01/2003	5.900%	5,622	0		
1727	Construction (AS)	01/1997	01/2004	6.800%	7,400	0		
1728	Construction (AS)	08/1998	08/2008	5.750%	3,181	0		
1729	Construction (AS)	02/1999	02/2014	5.900%	950	0		
1730	Construction (AS)	07/2000	07/2004	7.000%	10,948	0		
1731	Construction (AS)	01/2001	01/2010	6.050%	68	0		
1732	Construction (AS)	03/2002	03/2005	4.600%	1,990	0		
1733	Construction (AS)	10/2002	10/2005	3.000%	45,062	0		
1734	Construction (AS)	01/2004	01/2007	2.500%	13,357	0		
1735	Construction (AS)	11/2004	11/2008	3.750%	7,990	0		
1736	Construction (AS)	09/2006	09/2010	4.950%	9,681	0		
1737	Construction (AS)	01/2008	01/2012	3.200%	10,000	0		
1738	Construction (AS)	09/2008	09/2012	3.444%	10,000	0		
1739	Construction (AS)	09/2009	09/2014	2.746%	14,000	0		
1740	Construction (AS)	02/2010	02/2015	0.165%	7,500	0		
1741	Construction (AS)	08/2010	08/2015	1.619%	5,000	0		

**TABLE 13A:
HISTORICAL INVESTMENTS, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)**

	A	B	C	D	E	F	G	H
	Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1742	Construction (AS)	06/2011	06/2016	1.957%	7,000	0		
1743	Construction (AS)	08/2011	08/2016	1.423%	3,500	0		
1744	Construction (AS)	01/2012	09/2012	0.146%	10,000	0		
1745	Construction (AS)	06/2012	09/2015	0.671%	7,700	0		
1746	Construction (AS)	11/2012	11/2018	1.109%	5,250	5,250		
1747	Construction (AS)	04/2013	04/2017	0.622%	2,450	0		
1748	Construction (AS)	06/2013	06/2017	1.271%	3,000	3,000	06/2018	0.75%
1749	Construction (AS)	08/2013	08/2017	1.494%	2,000	2,000	08/2018	0.75%
1750	Construction (AS)	10/2013	10/2019	2.039%	4,200	4,200		
1751	Construction (AS)	10/2013	10/2019	2.039%	5,000	5,000		
1752	Construction (AS)	01/2014	01/2020	2.183%	1,750	1,750		
1753	Construction (AS)	01/2014	01/2020	2.183%	2,000	2,000		
1754	Construction (AS)	02/2014	09/2014	0.117%	950	0		
1755	Construction (AS)	04/2014	03/2020	0.947%	1,400	1,400		
1756	Construction (AS)	04/2014	03/2020	0.947%	2,000	2,000		
1757	Construction (AS)	05/2014	04/2020	0.526%	700	700		
1758	Construction (AS)	07/2014	07/2020	0.674%	1,050	1,050		
1759	Construction (AS)	11/2014	11/2020	1.809%	2,100	2,100		
1760	Construction (AS)	12/2014	12/2020	1.922%	1,050	1,050		
1761	Construction (AS)	02/2015	02/2021	1.761%	1,750	1,750		
1762	Construction (AS)	05/2015	05/2021	1.898%	2,100	2,100		
1763	Construction (AS)	09/2015	09/2017	0.744%	7,700	7,700	09/2018	0.75%
1764	Construction (AS)	10/2015	10/2021	1.942%	2,800	2,800		
1765	Construction (AS)	02/2016	02/2022	0.697%	3,000	3,000		
1766	Construction (AS)	06/2016	09/2016	0.436%	7,000	0		
1767	Construction (AS)	04/2017	01/2018	1.051%	2,450	2,450		
1768	Corps	09/2015	09/2033	3.134%	4,000	4,000		
1769	Corps	02/2016	02/2045	0.697%	3,000	3,000		
1770	Corps	04/2016	04/2031	2.661%	53,000	53,000		
1771	Corps	05/2016	05/2030	2.599%	15,000	15,000		
1772	Fish and Wildlife	05/1989	05/1999	8.950%	25,000	0		
1773	Fish and Wildlife	05/1991	05/1996	7.950%	50,000	0		
1774	Fish and Wildlife	02/1993	02/2008	6.950%	20,000	0		
1775	Fish and Wildlife	09/1994	09/1999	7.650%	20,000	0		
1776	Fish and Wildlife	08/1995	08/2010	7.200%	35,000	0		
1777	Fish and Wildlife	01/1998	01/2013	6.100%	60,000	0		
1778	Fish and Wildlife	09/1999	09/2003	6.300%	20,000	0		
1779	Fish and Wildlife	01/2001	01/2005	5.650%	25,000	0		
1780	Fish and Wildlife	09/2003	09/2007	3.100%	20,000	0		
1781	Fish and Wildlife	09/2005	09/2008	4.250%	20,000	0		
1782	Fish and Wildlife	09/2006	09/2010	4.950%	20,000	0		
1783	Fish and Wildlife	06/2007	06/2010	5.350%	30,000	0		
1784	Fish and Wildlife	09/2007	09/2011	4.700%	20,000	0		
1785	Fish and Wildlife	09/2008	09/2012	3.444%	20,000	0		
1786	Fish and Wildlife	06/2009	06/2024	4.556%	20,000	20,000		
1787	Fish and Wildlife	12/2009	12/2018	4.069%	26,000	26,000		
1788	Fish and Wildlife	08/2010	08/2019	2.646%	20,000	20,000		
1789	Fish and Wildlife	01/2011	01/2026	4.440%	50,000	50,000		
1790	Fish and Wildlife	02/2011	02/2026	4.398%	15,000	15,000		
1791	Fish and Wildlife	06/2011	06/2026	4.205%	15,000	15,000		
1792	Fish and Wildlife	01/2012	01/2038	3.893%	30,000	0		
1793	Fish and Wildlife	05/2012	05/2029	0.140%	5,000	0		
1794	Fish and Wildlife	06/2012	06/2041	3.666%	11,000	0		
1795	Fish and Wildlife	08/2012	08/2027	3.090%	11,000	0		
1796	Fish and Wildlife	11/2012	11/2027	5.046%	25,000	0		
1797	Fish and Wildlife	01/2013	09/2013	0.149%	60,000	0		
1798	Fish and Wildlife	03/2013	03/2028	5.445%	10,000	0		
1799	Fish and Wildlife	04/2013	04/2028	5.042%	6,000	0		
1800	Fish and Wildlife	06/2013	06/2028	6.607%	8,000	0		
1801	Fish and Wildlife	08/2013	08/2028	7.249%	5,000	0		
1802	Fish and Wildlife	10/2013	12/2026	3.717%	28,000	28,000		
1803	Fish and Wildlife	10/2013	05/2027	3.762%	11,000	11,000		
1804	Fish and Wildlife	10/2013	10/2028	3.880%	22,000	22,000		
1805	Fish and Wildlife	11/2013	09/2022	3.125%	31,000	31,000		
1806	Fish and Wildlife	11/2013	09/2023	3.375%	23,000	23,000	09/2028	3.64%
1807	Fish and Wildlife	11/2013	05/2027	0.713%	5,000	5,000		
1808	Fish and Wildlife	01/2014	01/2029	3.896%	7,000	7,000		
1809	Fish and Wildlife	04/2014	02/2029	0.697%	7,000	7,000		
1810	Fish and Wildlife	05/2014	04/2027	0.526%	11,000	11,000		
1811	Fish and Wildlife	08/2014	07/2029	0.674%	5,000	5,000		
1812	Fish and Wildlife	10/2014	01/2029	0.674%	15,000	15,000		
1813	Fish and Wildlife	11/2014	03/2030	0.947%	8,000	8,000		
1814	Fish and Wildlife	01/2015	01/2024	1.908%	5,000	5,000		
1815	Fish and Wildlife	03/2015	03/2028	2.511%	3,000	3,000		
1816	Fish and Wildlife	10/2015	02/2031	0.697%	4,000	4,000		
1817	Fish and Wildlife	10/2015	03/2031	0.947%	5,000	5,000		
1818	Fish and Wildlife	02/2016	02/2031	0.697%	4,000	4,000		
1819	Technology (G)	01/2015	01/2021	1.469%	35,000	35,000		
1820	Technology (G)	10/2015	07/2022	0.674%	6,000	6,000		
1821	Totals:				12,248,313	4,251,052		

TABLE 13B
PROJECTED INVESTMENTS, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation period
(\$000s) (FY 2019)

	A	B	C	D	E	F	G
	Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate
1	Bureau Direct	07/2017	07/2032	2.180%	13,000		
2	Bureau Direct	08/2017	08/2032	2.180%	13,000		
3	Bureau Direct	09/2017	09/2032	2.180%	14,000		
4	Bureau Direct	07/2018	07/2033	3.250%	28,000		
5	Bureau Direct	08/2018	08/2034	3.290%	28,000		
6	Bureau Direct	09/2018	09/2035	3.330%	29,000		
7	Bureau Direct	07/2019	07/2036	3.960%	47,000		
8	Bureau Direct	08/2019	08/2037	3.990%	48,000		
9	Bureau Direct	09/2019	09/2038	4.030%	48,000		
10	Columbia River Fish Mitigation	09/2017	09/2067	2.380%	63,629		
11	Columbia River Fish Mitigation	09/2018	09/2068	3.320%	147,186		
12	Columbia River Fish Mitigation	09/2019	09/2069	3.870%	63,746		
13	Construction (AS)	09/2017	09/2023	1.510%	3,150		
14	Construction (AS)	09/2018	09/2024	2.560%	5,600		
15	Construction (AS)	09/2019	09/2025	3.270%	5,950		
16	Corps	07/2017	07/2032	2.180%	26,796		
17	Corps	08/2017	08/2032	2.180%	26,796		
18	Corps	09/2017	09/2032	2.180%	27,796		
19	Corps	07/2018	07/2033	3.250%	53,000		
20	Corps	08/2018	08/2034	3.290%	53,000		
21	Corps	09/2018	09/2035	3.330%	53,000		
22	Corps	07/2019	07/2036	3.960%	40,000		
23	Corps	08/2019	08/2037	3.990%	41,000		
24	Corps	09/2019	09/2038	4.030%	41,000		
25	Fish and Wildlife	09/2017	09/2032	2.180%	40,000		
26	Fish and Wildlife	09/2018	09/2033	3.250%	51,000		
27	Fish and Wildlife	09/2019	09/2034	3.890%	44,000		
28	Technology (G)	09/2017	09/2022	1.400%	8,000		
29	Technology (G)	09/2018	09/2023	2.440%	5,000		
30	Technology (G)	09/2019	03/2024	3.160%	5,000		
31	Totals:				1,072,650		

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1	2017 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
2	2017 Boise	Historical	4,425	6.657%	295	-	-	295
3	2017 Bonneville 2nd Powerhouse	Historical	38,293	7.150%	2,738	-	-	2,738
4	2017 Bonneville Dam	Historical	135,618	5.283%	7,164	-	-	7,164
5	2017 Chief Joseph	Historical	37,578	5.043%	1,895	-	-	1,895
6	2017 Columbia Basin	Historical	97,915	5.669%	5,551	-	-	5,551
7	2017 Columbia Basin 3rd Powerhouse	Historical	12,631	7.150%	903	-	-	903
8	2017 Columbia River Fish Mitigation	Historical	1,422,823	4.370%	62,178	-	-	62,178
9	2017 Cougar	Historical	16,710	4.580%	765	-	-	765
10	2017 Detroit Lake/Big Cliff	Historical	2,168	4.673%	101	-	-	101
11	2017 Dworshak	Historical	13,495	6.331%	854	-	-	854
12	2017 Green Peter/Foster	Historical	863	4.287%	37	-	-	37
13	2017 Hills Creek	Historical	2,867	5.972%	171	-	-	171
14	2017 Hungry Horse Dam	Historical	11,549	6.139%	709	-	-	709
15	2017 Ice Harbor	Historical	19,152	4.811%	921	-	-	921
16	2017 John Day	Historical	30,473	5.425%	1,653	-	-	1,653
17	2017 Libby	Historical	22,777	6.652%	1,515	-	-	1,515
18	2017 Little Goose	Historical	14,231	6.058%	862	-	-	862
19	2017 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
20	2017 Lost Creek	Historical	272	6.370%	17	-	-	17
21	2017 Lower Granite	Historical	18,878	4.558%	860	-	-	860
22	2017 Lower Monument	Historical	13,764	5.380%	741	-	-	741
23	2017 Lower Snake Fish and Wildlife	Historical	233,996	7.082%	16,572	-	-	16,572
24	2017 McNary	Historical	15,096	4.927%	744	-	-	744
25	2017 Minidoka/Palisades	Historical	70,403	6.071%	4,274	-	-	4,274
26	2017 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
27	2017 The Dalles	Historical	46,132	5.230%	2,413	-	-	2,413
28	2017 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
29	2017 Yakima Roza	Historical	14	5.878%	1	-	-	1
30	2017 Bureau Direct	Historical	991,000	3.017%	29,897	-	-	29,897
31	2017 Bureau Direct	New	26,000	-	-	-	71	71
32	2017 Conservation	Historical	422,000	2.216%	9,352	-	-	9,352
33	2017 Conservation	New	20,000	0.263%	53	-	35	87
34	2017 Construction (AS)	Historical	48,850	1.440%	704	-	(9)	695
35	2017 Construction (AS)	New	2,450	0.263%	6	-	4	11
36	2017 Corps	Historical	75,000	2.595%	1,946	-	-	1,946
37	2017 Corps	New	53,592	-	-	-	146	146
38	2017 Fish and Wildlife	Historical	340,000	3.223%	10,958	-	-	10,958
39	2017 Technology (G)	Historical	41,000	1.353%	555	-	-	555
40	2017 Float	Historical	-	-	(632)	-	-	(632)
41	FY 2017	Subtotal:	4,330,645		168,420	-	247	168,667
42	2018 Albeni Falls	Historical	580	4.988%	29	-	-	29
43	2018 Boise	Historical	1,060	5.091%	54	-	-	54
44	2018 Bonneville Dam	Historical	131,701	5.227%	6,884	-	-	6,884
45	2018 Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
46	2018 Columbia Basin	Historical	90,988	5.556%	5,055	-	-	5,055
47	2018 Columbia River Fish Mitigation	Historical	1,430,683	4.183%	59,849	-	-	59,849
48	2018 Cougar	Historical	16,684	4.576%	763	-	-	763
49	2018 Detroit Lake/Big Cliff	Historical	2,130	4.629%	99	-	-	99
50	2018 Dworshak	Historical	4,692	4.795%	225	-	-	225
51	2018 Green Peter/Foster	Historical	837	4.198%	35	-	-	35
52	2018 Hills Creek	Historical	209	3.888%	8	-	-	8
53	2018 Hungry Horse Dam	Historical	5,231	4.918%	257	-	-	257
54	2018 Ice Harbor	Historical	18,167	4.715%	857	-	-	857
55	2018 John Day	Historical	19,039	4.537%	864	-	-	864
56	2018 Libby	Historical	7,336	5.603%	411	-	-	411
57	2018 Little Goose	Historical	8,129	5.239%	426	-	-	426
58	2018 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
59	2018 Lost Creek	Historical	154	5.774%	9	-	-	9
60	2018 Lower Granite	Historical	17,567	4.364%	767	-	-	767
61	2018 Lower Monument	Historical	11,604	5.051%	586	-	-	586
62	2018 Lower Snake Fish and Wildlife	Historical	5,152	4.370%	225	-	-	225
63	2018 McNary	Historical	14,461	4.829%	698	-	-	698
64	2018 Minidoka/Palisades	Historical	19,492	3.253%	634	-	-	634
65	2018 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
66	2018 The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
67	2018	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
68	2018	Yakima Roza	Historical	14	5.878%	1	-	-	1
69	2018	Bureau Direct	Historical	1,031,000	2.984%	30,768	-	-	30,768
70	2018	Bureau Direct	New	56,000	-	-	-	228	228
71	2018	Conservation	Historical	442,000	2.128%	9,407	-	(51)	9,356
72	2018	Construction (AS)	Historical	54,450	1.245%	678	-	(7)	670
73	2018	Corps	Historical	156,389	2.378%	3,719	-	-	3,719
74	2018	Corps	New	106,000	-	-	-	432	432
75	2018	Fish and Wildlife	Historical	380,000	3.113%	11,830	-	-	11,830
76	2018	Technology (G)	Historical	49,000	1.360%	667	-	-	667
77	2018	Float	Historical	-	-	(611)	-	-	(611)
78	FY 2018	Subtotal:		4,172,280		139,752	-	601	140,353
79	2019	Albeni Falls	Historical	580	4.988%	29	-	-	29
80	2019	Boise	Historical	1,060	5.091%	54	-	-	54
81	2019	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
82	2019	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
83	2019	Columbia Basin	Historical	90,988	5.556%	5,055	-	-	5,055
84	2019	Columbia River Fish Mitigation	Historical	1,541,604	4.056%	62,523	-	-	62,523
85	2019	Cougar	Historical	16,684	4.576%	763	-	-	763
86	2019	Detroit Lake/Big Cliff	Historical	2,130	4.629%	99	-	-	99
87	2019	Dworshak	Historical	4,692	4.795%	225	-	-	225
88	2019	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
89	2019	Hills Creek	Historical	202	3.813%	8	-	-	8
90	2019	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
91	2019	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
92	2019	John Day	Historical	18,421	4.492%	827	-	-	827
93	2019	Libby	Historical	1,774	4.751%	84	-	-	84
94	2019	Little Goose	Historical	3,521	4.406%	155	-	-	155
95	2019	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
96	2019	Lost Creek	Historical	7	3.748%	-	-	-	-
97	2019	Lower Granite	Historical	15,542	4.168%	648	-	-	648
98	2019	Lower Monument	Historical	8,303	4.723%	392	-	-	392
99	2019	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
100	2019	McNary	Historical	13,414	4.747%	637	-	-	637
101	2019	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
102	2019	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
103	2019	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
104	2019	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
105	2019	Bureau Direct	Historical	1,116,000	3.001%	33,493	-	(1,121)	32,372
106	2019	Bureau Direct	New	95,000	-	-	-	469	469
107	2019	Conservation	Historical	413,000	2.240%	9,252	-	-	9,252
108	2019	Construction (AS)	Historical	44,900	1.640%	736	-	(20)	717
109	2019	Corps	Historical	315,389	2.836%	8,945	-	-	8,945
110	2019	Corps	New	81,000	-	-	-	400	400
111	2019	Fish and Wildlife	Historical	431,000	3.007%	12,958	-	(309)	12,649
112	2019	Technology (G)	Historical	54,000	1.460%	789	-	-	789
113	2019	Float	Historical	-	-	(1,144)	-	-	(1,144)
114	FY 2019	Subtotal:		4,503,846		147,718	-	(582)	147,136
115	2020	Albeni Falls	Historical	580	4.988%	29	-	-	29
116	2020	Boise	Historical	1,060	5.091%	54	-	-	54
117	2020	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
118	2020	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
119	2020	Columbia Basin	Historical	76,752	5.497%	4,219	-	-	4,219
120	2020	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
121	2020	Cougar	Historical	16,684	4.576%	763	-	-	763
122	2020	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
123	2020	Dworshak	Historical	4,692	4.795%	225	-	-	225
124	2020	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
125	2020	Hills Creek	Historical	202	3.813%	8	-	-	8
126	2020	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
127	2020	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
128	2020	John Day	Historical	18,421	4.492%	827	-	-	827
129	2020	Libby	Historical	1,774	4.751%	84	-	-	84
130	2020	Little Goose	Historical	3,521	4.406%	155	-	-	155
131	2020	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
132	2020	Lost Creek	Historical	7	3.748%	-	-	-	-

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
133	2020	Lower Granite	Historical	15,542	4.168%	648	-	-	648
134	2020	Lower Monument	Historical	8,303	4.723%	392	-	-	392
135	2020	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
136	2020	McNary	Historical	13,414	4.747%	637	-	-	637
137	2020	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
138	2020	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
139	2020	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
140	2020	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
141	2020	Bureau Direct	Historical	1,154,000	3.161%	36,480	-	(1,023)	35,458
142	2020	Conservation	Historical	413,000	2.240%	9,252	-	-	9,252
143	2020	Construction (AS)	Historical	45,600	1.647%	751	-	(94)	657
144	2020	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
145	2020	Fish and Wildlife	Historical	429,000	3.173%	13,613	-	-	13,613
146	2020	Replacements	New	218,435	2.215%	4,838	-	-	4,838
147	2020	Technology (G)	Historical	59,000	1.604%	947	-	-	947
148	2020	Float	Historical	-	-	(975)	-	-	(975)
149	FY 2020	Subtotal:		4,756,356		162,853	-	(1,117)	161,736
150	2021	Albeni Falls	Historical	580	4.988%	29	-	-	29
151	2021	Boise	Historical	1,060	5.091%	54	-	-	54
152	2021	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
153	2021	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
154	2021	Columbia Basin	Historical	70,209	5.462%	3,835	-	-	3,835
155	2021	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
156	2021	Cougar	Historical	16,684	4.576%	763	-	-	763
157	2021	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
158	2021	Dworshak	Historical	4,692	4.795%	225	-	-	225
159	2021	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
160	2021	Hills Creek	Historical	202	3.813%	8	-	-	8
161	2021	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
162	2021	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
163	2021	John Day	Historical	18,421	4.492%	827	-	-	827
164	2021	Libby	Historical	1,774	4.751%	84	-	-	84
165	2021	Little Goose	Historical	3,521	4.406%	155	-	-	155
166	2021	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
167	2021	Lost Creek	Historical	7	3.748%	-	-	-	-
168	2021	Lower Granite	Historical	15,542	4.168%	648	-	-	648
169	2021	Lower Monument	Historical	8,303	4.723%	392	-	-	392
170	2021	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
171	2021	McNary	Historical	13,414	4.747%	637	-	-	637
172	2021	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
173	2021	RRP - Green Springs	Historical	3	3.244%	-	-	-	-
174	2021	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
175	2021	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
176	2021	Bureau Direct	Historical	1,034,000	3.282%	33,936	-	(165)	33,771
177	2021	Conservation	Historical	413,000	2.240%	9,252	-	(80)	9,173
178	2021	Construction (AS)	Historical	27,500	1.982%	545	-	(34)	511
179	2021	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
180	2021	Fish and Wildlife	Historical	429,000	3.173%	13,613	-	-	13,613
181	2021	Replacements	Historical	218,435	4.430%	9,677	-	-	9,677
182	2021	Replacements	New	218,435	2.215%	4,838	-	-	4,838
183	2021	Technology (G)	Historical	59,000	1.169%	690	-	(85)	605
184	2021	Float	Historical	-	-	(1,006)	-	-	(1,006)
185	FY 2021	Subtotal:		4,830,148		169,108	-	(363)	168,745
186	2022	Albeni Falls	Historical	580	4.988%	29	-	-	29
187	2022	Boise	Historical	1,060	5.091%	54	-	-	54
188	2022	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
189	2022	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
190	2022	Columbia Basin	Historical	68,069	5.449%	3,709	-	-	3,709
191	2022	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
192	2022	Cougar	Historical	16,684	4.576%	763	-	-	763
193	2022	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
194	2022	Dworshak	Historical	4,692	4.795%	225	-	-	225
195	2022	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
196	2022	Hills Creek	Historical	202	3.813%	8	-	-	8
197	2022	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
198	2022	Ice Harbor	Historical	17,402	4.664%	812	-	-	812

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
199	2022	John Day	Historical	18,421	4.492%	827	-	-	827
200	2022	Libby	Historical	1,774	4.751%	84	-	-	84
201	2022	Little Goose	Historical	3,521	4.406%	155	-	-	155
202	2022	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
203	2022	Lost Creek	Historical	7	3.748%		-	-	
204	2022	Lower Granite	Historical	15,542	4.168%	648	-	-	648
205	2022	Lower Monument	Historical	8,303	4.723%	392	-	-	392
206	2022	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
207	2022	McNary	Historical	13,414	4.747%	637	-	-	637
208	2022	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
209	2022	RRP - Green Springs	Historical	3	3.244%		-	-	
210	2022	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
211	2022	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
212	2022	Bureau Direct	Historical	937,000	3.351%	31,396	-	-	31,396
213	2022	Conservation	Historical	394,000	2.227%	8,774	-	(58)	8,715
214	2022	Construction (AS)	Historical	20,500	2.064%	423	-	(24)	399
215	2022	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
216	2022	Fish and Wildlife	Historical	429,000	3.173%	13,613	-	-	13,613
217	2022	Replacements	Historical	436,871	4.430%	19,353	-	-	19,353
218	2022	Replacements	New	218,435	2.215%	4,838	-	-	4,838
219	2022	Technology (G)	Historical	24,000	1.802%	432	-	(7)	426
220	2022	Float	Historical	-	-	(898)	-	-	(898)
221	FY 2022	Subtotal:		4,888,444		175,369	-	(89)	175,279
222	2023	Albeni Falls	Historical	580	4.988%	29	-	-	29
223	2023	Boise	Historical	1,060	5.091%	54	-	-	54
224	2023	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
225	2023	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
226	2023	Columbia Basin	Historical	30,368	4.920%	1,494	-	-	1,494
227	2023	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
228	2023	Cougar	Historical	16,684	4.576%	763	-	-	763
229	2023	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
230	2023	Dworshak	Historical	4,692	4.795%	225	-	-	225
231	2023	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
232	2023	Hills Creek	Historical	202	3.813%	8	-	-	8
233	2023	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
234	2023	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
235	2023	John Day	Historical	18,421	4.492%	827	-	-	827
236	2023	Libby	Historical	1,774	4.751%	84	-	-	84
237	2023	Little Goose	Historical	3,521	4.406%	155	-	-	155
238	2023	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
239	2023	Lost Creek	Historical	7	3.748%		-	-	
240	2023	Lower Granite	Historical	15,542	4.168%	648	-	-	648
241	2023	Lower Monument	Historical	8,303	4.723%	392	-	-	392
242	2023	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
243	2023	McNary	Historical	13,414	4.747%	637	-	-	637
244	2023	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
245	2023	RRP - Green Springs	Historical	3	3.244%		-	-	
246	2023	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
247	2023	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
248	2023	Bureau Direct	Historical	918,000	3.397%	31,182	-	(456)	30,726
249	2023	Conservation	Historical	378,000	2.025%	7,654	-	(947)	6,708
250	2023	Construction (AS)	Historical	14,700	2.622%	385	-	-	385
251	2023	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
252	2023	Fish and Wildlife	Historical	398,000	3.177%	12,644	-	-	12,644
253	2023	Replacements	Historical	655,306	4.430%	29,030	-	-	29,030
254	2023	Replacements	New	218,435	2.215%	4,838	-	-	4,838
255	2023	Technology (G)	Historical	10,000	2.800%	280	-	-	280
256	2023	Float	Historical	-	-	(977)	-	-	(977)
257	FY 2023	Subtotal:		4,983,378		180,259	-	(1,402)	178,857
258	2024	Albeni Falls	Historical	580	4.988%	29	-	-	29
259	2024	Boise	Historical	1,060	5.091%	54	-	-	54
260	2024	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
261	2024	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
262	2024	Columbia Basin	Historical	30,368	4.920%	1,494	-	-	1,494
263	2024	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
264	2024	Cougar	Historical	16,684	4.576%	763	-	-	763

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
265	2024	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
266	2024	Dworshak	Historical	4,692	4.795%	225	-	-	225
267	2024	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
268	2024	Hills Creek	Historical	202	3.813%	8	-	-	8
269	2024	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
270	2024	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
271	2024	John Day	Historical	18,421	4.492%	827	-	-	827
272	2024	Libby	Historical	1,774	4.751%	84	-	-	84
273	2024	Little Goose	Historical	3,521	4.406%	155	-	-	155
274	2024	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
275	2024	Lost Creek	Historical	7	3.748%		-	-	
276	2024	Lower Granite	Historical	15,542	4.168%	648	-	-	648
277	2024	Lower Monument	Historical	8,303	4.723%	392	-	-	392
278	2024	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
279	2024	McNary	Historical	13,414	4.747%	637	-	-	637
280	2024	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
281	2024	RRP - Green Springs	Historical	3	3.244%		-	-	
282	2024	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
283	2024	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
284	2024	Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
285	2024	Conservation	Historical	236,000	1.202%	2,837	-	(260)	2,577
286	2024	Construction (AS)	Historical	11,550	2.926%	338	-	-	338
287	2024	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
288	2024	Fish and Wildlife	Historical	398,000	3.180%	12,658	-	(244)	12,415
289	2024	Replacements	Historical	873,742	4.430%	38,707	-	-	38,707
290	2024	Replacements	New	218,435	2.215%	4,838	-	-	4,838
291	2024	Technology (G)	Historical	5,000	1.580%	79	-	-	79
292	2024	Float	Historical	-	-	(951)	-	-	(951)
293	FY 2024	Subtotal:		5,051,664		184,342	-	(503)	183,839
294	2025	Albeni Falls	Historical	580	4.988%	29	-	-	29
295	2025	Boise	Historical	1,060	5.091%	54	-	-	54
296	2025	Bonneville Dam	Historical	107,256	5.022%	5,387	-	-	5,387
297	2025	Chief Joseph	Historical	29,608	4.475%	1,325	-	-	1,325
298	2025	Columbia Basin	Historical	25,489	4.737%	1,207	-	-	1,207
299	2025	Columbia River Fish Mitigation	Historical	1,602,497	4.045%	64,822	-	-	64,822
300	2025	Cougar	Historical	16,684	4.576%	763	-	-	763
301	2025	Detroit Lake/Big Cliff	Historical	1,848	4.439%	82	-	-	82
302	2025	Dworshak	Historical	4,692	4.795%	225	-	-	225
303	2025	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
304	2025	Hills Creek	Historical	202	3.813%	8	-	-	8
305	2025	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
306	2025	Ice Harbor	Historical	17,402	4.664%	812	-	-	812
307	2025	John Day	Historical	18,421	4.492%	827	-	-	827
308	2025	Libby	Historical	1,774	4.751%	84	-	-	84
309	2025	Little Goose	Historical	3,521	4.406%	155	-	-	155
310	2025	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
311	2025	Lost Creek	Historical	7	3.748%		-	-	
312	2025	Lower Granite	Historical	15,542	4.168%	648	-	-	648
313	2025	Lower Monument	Historical	8,303	4.723%	392	-	-	392
314	2025	Lower Snake Fish and Wildlife	Historical	4,827	4.268%	206	-	-	206
315	2025	McNary	Historical	13,414	4.747%	637	-	-	637
316	2025	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
317	2025	RRP - Green Springs	Historical	3	3.244%		-	-	
318	2025	The Dalles	Historical	41,553	5.082%	2,112	-	-	2,112
319	2025	Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
320	2025	Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
321	2025	Conservation	Historical	139,000	1.507%	2,095	-	(104)	1,991
322	2025	Construction (AS)	Historical	5,950	3.270%	195	-	-	195
323	2025	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
324	2025	Fish and Wildlife	Historical	373,000	3.137%	11,699	-	-	11,699
325	2025	Replacements	Historical	1,092,177	4.430%	48,383	-	-	48,383
326	2025	Replacements	New	218,435	2.215%	4,838	-	-	4,838
327	2025	Float	Historical	-	-	(847)	-	-	(847)
328	FY 2025	Subtotal:		5,132,620		191,914	-	(104)	191,810

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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
329	2026	Albeni Falls	Historical	580	4.988%	29	-	-	29
330	2026	Boise	Historical	1,060	5.091%	54	-	-	54
331	2026	Bonneville Dam	Historical	104,278	5.000%	5,213	-	-	5,213
332	2026	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
333	2026	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
334	2026	Columbia River Fish Mitigation	Historical	1,593,700	4.037%	64,338	-	-	64,338
335	2026	Cougar	Historical	16,684	4.576%	763	-	-	763
336	2026	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
337	2026	Dworshak	Historical	4,493	4.764%	214	-	-	214
338	2026	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
339	2026	Hills Creek	Historical	200	3.800%	8	-	-	8
340	2026	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
341	2026	Ice Harbor	Historical	12,768	4.396%	561	-	-	561
342	2026	John Day	Historical	14,911	4.284%	639	-	-	639
343	2026	Libby	Historical	1,774	4.751%	84	-	-	84
344	2026	Little Goose	Historical	3,494	4.398%	154	-	-	154
345	2026	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
346	2026	Lost Creek	Historical	7	3.748%		-	-	
347	2026	Lower Granite	Historical	13,411	3.964%	532	-	-	532
348	2026	Lower Monument	Historical	8,273	4.720%	391	-	-	391
349	2026	Lower Snake Fish and Wildlife	Historical	3,930	3.987%	157	-	-	157
350	2026	McNary	Historical	13,414	4.747%	637	-	-	637
351	2026	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
352	2026	RRP - Green Springs	Historical	3	3.244%		-	-	
353	2026	The Dalles	Historical	40,327	5.070%	2,044	-	-	2,044
354	2026	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
355	2026	Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
356	2026	Conservation	Historical	70,000	1.338%	937	-	(533)	404
357	2026	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
358	2026	Fish and Wildlife	Historical	373,000	2.751%	10,259	-	(580)	9,680
359	2026	Replacements	Historical	1,310,612	4.430%	58,060	-	-	58,060
360	2026	Replacements	New	218,435	2.215%	4,838	-	-	4,838
361	2026	Float	Historical	-	-	(928)	-	-	(928)
362	FY 2026	Subtotal:		5,247,585		197,134	-	(1,113)	196,021
363	2027	Albeni Falls	Historical	580	4.988%	29	-	-	29
364	2027	Boise	Historical	1,060	5.091%	54	-	-	54
365	2027	Bonneville Dam	Historical	104,278	5.000%	5,213	-	-	5,213
366	2027	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
367	2027	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
368	2027	Columbia River Fish Mitigation	Historical	1,593,700	4.037%	64,338	-	-	64,338
369	2027	Cougar	Historical	16,684	4.576%	763	-	-	763
370	2027	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
371	2027	Dworshak	Historical	4,493	4.764%	214	-	-	214
372	2027	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
373	2027	Hills Creek	Historical	200	3.800%	8	-	-	8
374	2027	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
375	2027	Ice Harbor	Historical	11,778	4.314%	508	-	-	508
376	2027	John Day	Historical	14,911	4.284%	639	-	-	639
377	2027	Libby	Historical	1,774	4.751%	84	-	-	84
378	2027	Little Goose	Historical	3,494	4.398%	154	-	-	154
379	2027	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
380	2027	Lost Creek	Historical	7	3.748%		-	-	
381	2027	Lower Granite	Historical	13,411	3.964%	532	-	-	532
382	2027	Lower Monument	Historical	8,273	4.720%	391	-	-	391
383	2027	Lower Snake Fish and Wildlife	Historical	3,930	3.987%	157	-	-	157
384	2027	McNary	Historical	13,414	4.747%	637	-	-	637
385	2027	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
386	2027	RRP - Green Springs	Historical	3	3.244%		-	-	
387	2027	The Dalles	Historical	40,327	5.070%	2,044	-	-	2,044
388	2027	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
389	2027	Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
390	2027	Conservation	Historical	31,000	0.682%	211	-	-	211
391	2027	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
392	2027	Fish and Wildlife	Historical	293,000	2.618%	7,670	-	(435)	7,236
393	2027	Replacements	Historical	1,529,048	4.430%	67,737	-	-	67,737

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
394	2027	Replacements	New	218,435	2.215%	4,838	-	-	4,838
395	2027	Float	Historical	-	-	(889)	-	-	(889)
396	FY 2027	Subtotal:		5,346,031		203,482	-	(435)	203,047
397	2028	Albeni Falls	Historical	580	4.988%	29	-	-	29
398	2028	Boise	Historical	1,060	5.091%	54	-	-	54
399	2028	Bonneville Dam	Historical	84,910	4.914%	4,172	-	-	4,172
400	2028	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
401	2028	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
402	2028	Columbia River Fish Mitigation	Historical	1,572,958	4.019%	63,224	-	-	63,224
403	2028	Cougar	Historical	16,684	4.576%	763	-	-	763
404	2028	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
405	2028	Dworshak	Historical	3,864	4.665%	180	-	-	180
406	2028	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
407	2028	Hills Creek	Historical	200	3.800%	8	-	-	8
408	2028	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
409	2028	Ice Harbor	Historical	7,552	3.720%	281	-	-	281
410	2028	John Day	Historical	12,081	4.029%	487	-	-	487
411	2028	Libby	Historical	1,774	4.751%	84	-	-	84
412	2028	Little Goose	Historical	3,426	4.379%	150	-	-	150
413	2028	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
414	2028	Lost Creek	Historical	7	3.748%		-	-	
415	2028	Lower Granite	Historical	13,411	3.964%	532	-	-	532
416	2028	Lower Monument	Historical	4,850	4.258%	207	-	-	207
417	2028	Lower Snake Fish and Wildlife	Historical	3,700	3.901%	144	-	-	144
418	2028	McNary	Historical	7,276	4.218%	307	-	-	307
419	2028	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
420	2028	RRP - Green Springs	Historical	3	3.244%		-	-	
421	2028	The Dalles	Historical	40,145	5.068%	2,035	-	-	2,035
422	2028	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
423	2028	Bureau Direct	Historical	918,000	3.335%	30,615	-	-	30,615
424	2028	Conservation	Historical	25,000	0.366%	92	-	(76)	16
425	2028	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
426	2028	Fish and Wildlife	Historical	238,000	2.775%	6,605	-	-	6,605
427	2028	Replacements	Historical	1,747,483	4.430%	77,414	-	-	77,414
428	2028	Replacements	New	218,435	2.215%	4,838	-	-	4,838
429	2028	Float	Historical	-	-	(784)	-	-	(784)
430	FY 2028	Subtotal:		5,445,630		208,969	-	(76)	208,893
431	2029	Albeni Falls	Historical	580	4.988%	29	-	-	29
432	2029	Boise	Historical	1,060	5.091%	54	-	-	54
433	2029	Bonneville Dam	Historical	84,910	4.914%	4,172	-	-	4,172
434	2029	Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
435	2029	Columbia Basin	Historical	21,762	4.542%	988	-	-	988
436	2029	Columbia River Fish Mitigation	Historical	1,568,334	4.015%	62,975	-	-	62,975
437	2029	Cougar	Historical	16,684	4.576%	763	-	-	763
438	2029	Detroit Lake/Big Cliff	Historical	1,830	4.428%	81	-	-	81
439	2029	Dworshak	Historical	3,864	4.665%	180	-	-	180
440	2029	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
441	2029	Hills Creek	Historical	200	3.800%	8	-	-	8
442	2029	Hungry Horse Dam	Historical	4,679	4.806%	225	-	-	225
443	2029	Ice Harbor	Historical	7,552	3.720%	281	-	-	281
444	2029	John Day	Historical	12,081	4.029%	487	-	-	487
445	2029	Libby	Historical	1,774	4.751%	84	-	-	84
446	2029	Little Goose	Historical	3,426	4.379%	150	-	-	150
447	2029	Lookout Dam	Historical	8,373	5.052%	423	-	-	423
448	2029	Lost Creek	Historical	7	3.748%		-	-	
449	2029	Lower Granite	Historical	13,411	3.964%	532	-	-	532
450	2029	Lower Monument	Historical	4,850	4.258%	207	-	-	207
451	2029	Lower Snake Fish and Wildlife	Historical	3,700	3.901%	144	-	-	144
452	2029	McNary	Historical	7,276	4.218%	307	-	-	307
453	2029	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
454	2029	RRP - Green Springs	Historical	3	3.244%		-	-	
455	2029	The Dalles	Historical	40,145	5.068%	2,035	-	-	2,035
456	2029	Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
457	2029	Bureau Direct	Historical	893,000	3.254%	29,056	-	(325)	28,731
458	2029	Corps	Historical	437,389	3.158%	13,813	-	-	13,813
459	2029	Fish and Wildlife	Historical	212,000	2.402%	5,091	-	(426)	4,666

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
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(\$000s) (FY 2019)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
460	2029 Replacements	Historical	1,965,919	4.430%	87,090	-	-	87,090
461	2029 Replacements	New	218,435	2.215%	4,838	-	-	4,838
462	2029 Float	Historical	-	-	(1,861)	-	-	(1,861)
463	FY 2029	Subtotal:	5,583,441		214,156	-	(750)	213,405
464	2030 Albeni Falls	Historical	580	4.988%	29	-	-	29
465	2030 Boise	Historical	1,060	5.091%	54	-	-	54
466	2030 Bonneville Dam	Historical	53,588	4.666%	2,500	-	-	2,500
467	2030 Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
468	2030 Columbia Basin	Historical	21,762	4.542%	988	-	-	988
469	2030 Columbia River Fish Mitigation	Historical	1,424,874	3.895%	55,499	-	-	55,499
470	2030 Cougar	Historical	13,061	4.354%	569	-	-	569
471	2030 Detroit Lake/Big Cliff	Historical	1,607	4.332%	70	-	-	70
472	2030 Dworshak	Historical	3,102	4.552%	141	-	-	141
473	2030 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
474	2030 Hills Creek	Historical	154	3.404%	5	-	-	5
475	2030 Hungry Horse Dam	Historical	1,728	4.260%	74	-	-	74
476	2030 Ice Harbor	Historical	7,502	3.711%	278	-	-	278
477	2030 John Day	Historical	9,254	3.694%	342	-	-	342
478	2030 Libby	Historical	1,774	4.751%	84	-	-	84
479	2030 Little Goose	Historical	3,280	4.346%	143	-	-	143
480	2030 Lookout Dam	Historical	883	4.435%	39	-	-	39
481	2030 Lost Creek	Historical	7	3.748%		-	-	
482	2030 Lower Granite	Historical	12,977	3.925%	509	-	-	509
483	2030 Lower Monument	Historical	4,301	4.148%	178	-	-	178
484	2030 Lower Snake Fish and Wildlife	Historical	3,598	3.866%	139	-	-	139
485	2030 McNary	Historical	6,630	4.130%	274	-	-	274
486	2030 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
487	2030 RRP - Green Springs	Historical	3	3.244%		-	-	
488	2030 The Dalles	Historical	4,126	4.574%	189	-	-	189
489	2030 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
490	2030 Bureau Direct	Historical	772,000	3.022%	23,331	-	(935)	22,396
491	2030 Corps	Historical	437,389	3.158%	13,813	-	(131)	13,682
492	2030 Fish and Wildlife	Historical	156,000	2.809%	4,382	-	-	4,382
493	2030 Replacements	Historical	2,184,354	4.430%	96,767	-	-	96,767
494	2030 Replacements	New	218,435	2.215%	4,838	-	-	4,838
495	2030 Float	Historical	-	-	(1,585)	-	-	(1,585)
496	FY 2030	Subtotal:	5,392,403		205,561	-	(1,066)	204,495
497	2031 Albeni Falls	Historical	99	4.322%	4	-	-	4
498	2031 Boise	Historical	81	4.792%	4	-	-	4
499	2031 Bonneville Dam	Historical	32,739	4.378%	1,433	-	-	1,433
500	2031 Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
501	2031 Columbia Basin	Historical	9,871	3.852%	380	-	-	380
502	2031 Columbia River Fish Mitigation	Historical	1,345,001	3.827%	51,473	-	-	51,473
503	2031 Cougar	Historical	4,811	3.035%	146	-	-	146
504	2031 Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
505	2031 Dworshak	Historical	2,390	4.381%	105	-	-	105
506	2031 Green Peter/Foster	Historical	638	3.673%	23	-	-	23
507	2031 Hills Creek	Historical	154	3.404%	5	-	-	5
508	2031 Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
509	2031 Ice Harbor	Historical	7,502	3.711%	278	-	-	278
510	2031 John Day	Historical	9,021	3.660%	330	-	-	330
511	2031 Libby	Historical	1,774	4.751%	84	-	-	84
512	2031 Little Goose	Historical	3,280	4.346%	143	-	-	143
513	2031 Lookout Dam	Historical	311	3.396%	11	-	-	11
514	2031 Lost Creek	Historical	7	3.748%		-	-	
515	2031 Lower Granite	Historical	12,977	3.925%	509	-	-	509
516	2031 Lower Monument	Historical	4,301	4.148%	178	-	-	178
517	2031 Lower Snake Fish and Wildlife	Historical	3,598	3.866%	139	-	-	139
518	2031 McNary	Historical	6,630	4.130%	274	-	-	274
519	2031 Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
520	2031 RRP - Green Springs	Historical	3	3.244%		-	-	
521	2031 The Dalles	Historical	3,987	4.559%	182	-	-	182
522	2031 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
523	2031 Bureau Direct	Historical	583,516	2.625%	15,319	-	(991)	14,328
524	2031 Corps	Historical	422,389	3.178%	13,423	-	(585)	12,838
525	2031 Fish and Wildlife	Historical	148,000	2.900%	4,293	-	(5)	4,288

TABLE 13C:
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	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
526	2031	Replacements	Historical	2,402,789	4.430%	106,444	-	-	106,444
527	2031	Replacements	New	218,435	2.215%	4,838	-	-	4,838
528	2031	Float	Historical	-	-	(1,690)	-	-	(1,690)
529	FY 2031	Subtotal:		5,274,049		200,291	-	(1,581)	198,710
530	2032	Albeni Falls	Historical	99	4.322%	4	-	-	4
531	2032	Boise	Historical	81	4.792%	4	-	-	4
532	2032	Bonneville Dam	Historical	32,739	4.378%	1,433	-	-	1,433
533	2032	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
534	2032	Columbia Basin	Historical	9,871	3.852%	380	-	-	380
535	2032	Columbia River Fish Mitigation	Historical	1,153,947	3.716%	42,875	-	-	42,875
536	2032	Cougar	Historical	4,811	3.035%	146	-	-	146
537	2032	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
538	2032	Dworshak	Historical	2,390	4.381%	105	-	-	105
539	2032	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
540	2032	Hills Creek	Historical	154	3.404%	5	-	-	5
541	2032	Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
542	2032	Ice Harbor	Historical	7,502	3.711%	278	-	-	278
543	2032	John Day	Historical	8,420	3.600%	303	-	-	303
544	2032	Libby	Historical	1,774	4.751%	84	-	-	84
545	2032	Little Goose	Historical	3,280	4.346%	143	-	-	143
546	2032	Lookout Dam	Historical	311	3.396%	11	-	-	11
547	2032	Lost Creek	Historical	7	3.748%		-	-	
548	2032	Lower Granite	Historical	12,977	3.925%	509	-	-	509
549	2032	Lower Monument	Historical	4,016	4.123%	166	-	-	166
550	2032	Lower Snake Fish and Wildlife	Historical	3,219	3.792%	122	-	-	122
551	2032	McNary	Historical	2,550	3.537%	90	-	-	90
552	2032	Minidoka/Palispades	Historical	19,450	3.247%	632	-	-	632
553	2032	RRP - Green Springs	Historical	3	3.244%		-	-	
554	2032	The Dalles	Historical	1,957	4.621%	90	-	-	90
555	2032	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
556	2032	Bureau Direct	Historical	482,000	2.668%	12,859	-	(133)	12,726
557	2032	Corps	Historical	369,389	3.252%	12,013	-	(146)	11,867
558	2032	Fish and Wildlife	Historical	135,000	3.142%	4,241	-	-	4,241
559	2032	Replacements	Historical	2,621,225	4.430%	116,120	-	-	116,120
560	2032	Replacements	New	218,435	2.215%	4,838	-	-	4,838
561	2032	Float	Historical	-	-	(2,030)	-	-	(2,030)
562	FY 2032	Subtotal:		5,126,539		196,776	-	(279)	196,497
563	2033	Albeni Falls	Historical	99	4.322%	4	-	-	4
564	2033	Boise	Historical	64	4.875%	3	-	-	3
565	2033	Bonneville Dam	Historical	30,111	4.367%	1,315	-	-	1,315
566	2033	Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
567	2033	Columbia Basin	Historical	7,884	3.688%	291	-	-	291
568	2033	Columbia River Fish Mitigation	Historical	875,403	3.481%	30,470	-	-	30,470
569	2033	Cougar	Historical	4,581	2.964%	136	-	-	136
570	2033	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
571	2033	Dworshak	Historical	10	4.877%		-	-	
572	2033	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
573	2033	Hills Creek	Historical	154	3.404%	5	-	-	5
574	2033	Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
575	2033	Ice Harbor	Historical	4,887	3.355%	164	-	-	164
576	2033	John Day	Historical	8,420	3.600%	303	-	-	303
577	2033	Libby	Historical	1,774	4.751%	84	-	-	84
578	2033	Little Goose	Historical	109	3.493%	4	-	-	4
579	2033	Lookout Dam	Historical	311	3.396%	11	-	-	11
580	2033	Lost Creek	Historical	7	3.748%		-	-	
581	2033	Lower Granite	Historical	7,308	3.576%	261	-	-	261
582	2033	Lower Monument	Historical	1,684	3.773%	64	-	-	64
583	2033	Lower Snake Fish and Wildlife	Historical	1,685	3.261%	55	-	-	55
584	2033	McNary	Historical	2,550	3.537%	90	-	-	90
585	2033	Minidoka/Palispades	Historical	19,450	3.247%	632	-	-	632
586	2033	RRP - Green Springs	Historical	3	3.244%		-	-	
587	2033	The Dalles	Historical	1,957	4.621%	90	-	-	90
588	2033	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
589	2033	Bureau Direct	Historical	416,000	2.223%	9,246	-	(827)	8,419
590	2033	Corps	Historical	288,000	2.967%	8,545	-	(439)	8,105
591	2033	Fish and Wildlife	Historical	95,000	3.546%	3,369	-	-	3,369

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	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
592	2033	Replacements	Historical	2,839,660	4.430%	125,797	-	-	125,797
593	2033	Replacements	New	218,435	2.215%	4,838	-	-	4,838
594	2033	Float	Historical	-	-	(2,048)	-	-	(2,048)
595	FY 2033	Subtotal:		4,856,478		185,083	-	(1,266)	183,817
596	2034	Albeni Falls	Historical	57	4.375%	2	-	-	2
597	2034	Boise	Historical	64	4.875%	3	-	-	3
598	2034	Bonneville Dam	Historical	25,942	4.373%	1,134	-	-	1,134
599	2034	Chief Joseph	Historical	3,542	4.856%	172	-	-	172
600	2034	Columbia Basin	Historical	7,007	3.618%	254	-	-	254
601	2034	Columbia River Fish Mitigation	Historical	818,572	3.427%	28,055	-	-	28,055
602	2034	Cougar	Historical	4,522	2.947%	133	-	-	133
603	2034	Detroit Lake/Big Cliff	Historical	576	2.913%	17	-	-	17
604	2034	Dworshak	Historical	10	4.877%		-	-	
605	2034	Green Peter/Foster	Historical	638	3.673%	23	-	-	23
606	2034	Hills Creek	Historical	154	3.404%	5	-	-	5
607	2034	Hungry Horse Dam	Historical	654	3.939%	26	-	-	26
608	2034	Ice Harbor	Historical	4,680	3.316%	155	-	-	155
609	2034	John Day	Historical	8,064	3.571%	288	-	-	288
610	2034	Libby	Historical	1,734	4.763%	83	-	-	83
611	2034	Little Goose	Historical	79	3.203%	3	-	-	3
612	2034	Lookout Dam	Historical	311	3.396%	11	-	-	11
613	2034	Lost Creek	Historical	7	3.748%		-	-	
614	2034	Lower Granite	Historical	6,152	3.449%	212	-	-	212
615	2034	Lower Monument	Historical	1,684	3.773%	64	-	-	64
616	2034	Lower Snake Fish and Wildlife	Historical	1,674	3.254%	54	-	-	54
617	2034	McNary	Historical	2,550	3.537%	90	-	-	90
618	2034	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
619	2034	RRP - Green Springs	Historical	3	3.244%		-	-	
620	2034	The Dalles	Historical	1,957	4.621%	90	-	-	90
621	2034	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
622	2034	Bureau Direct	Historical	194,000	1.671%	3,241	-	(417)	2,824
623	2034	Corps	Historical	146,409	2.913%	4,265	-	(392)	3,873
624	2034	Fish and Wildlife	Historical	44,000	3.890%	1,712	-	-	1,712
625	2034	Replacements	Historical	3,058,096	4.430%	135,474	-	-	135,474
626	2034	Replacements	New	218,435	2.215%	4,838	-	-	4,838
627	2034	Float	Historical	-	-	(2,038)	-	-	(2,038)
628	FY 2034	Subtotal:		4,571,037		179,000	-	(809)	178,191
629	2035	Albeni Falls	Historical	57	4.375%	2	-	-	2
630	2035	Boise	Historical	64	4.875%	3	-	-	3
631	2035	Bonneville Dam	Historical	25,941	4.373%	1,134	-	-	1,134
632	2035	Chief Joseph	Historical	3,542	4.856%	172	-	-	172
633	2035	Columbia Basin	Historical	5,266	3.574%	188	-	-	188
634	2035	Columbia River Fish Mitigation	Historical	582,535	3.260%	18,989	-	-	18,989
635	2035	Cougar	Historical	4,511	2.945%	133	-	-	133
636	2035	Detroit Lake/Big Cliff	Historical	558	2.882%	16	-	-	16
637	2035	Dworshak	Historical	10	4.877%		-	-	
638	2035	Green Peter/Foster	Historical	166	3.166%	5	-	-	5
639	2035	Hills Creek	Historical	142	3.375%	5	-	-	5
640	2035	Hungry Horse Dam	Historical	139	4.628%	6	-	-	6
641	2035	Ice Harbor	Historical	3,862	3.224%	124	-	-	124
642	2035	John Day	Historical	7,890	3.567%	281	-	-	281
643	2035	Libby	Historical	1,582	4.860%	77	-	-	77
644	2035	Little Goose	Historical	79	3.203%	3	-	-	3
645	2035	Lookout Dam	Historical	294	3.375%	10	-	-	10
646	2035	Lower Granite	Historical	3,499	3.127%	109	-	-	109
647	2035	Lower Monument	Historical	254	3.199%	8	-	-	8
648	2035	Lower Snake Fish and Wildlife	Historical	1,452	3.159%	46	-	-	46
649	2035	McNary	Historical	1,226	3.230%	40	-	-	40
650	2035	Minidoka/Palisades	Historical	19,450	3.247%	632	-	-	632
651	2035	RRP - Green Springs	Historical	3	3.244%		-	-	
652	2035	The Dalles	Historical	1,957	4.621%	90	-	-	90
653	2035	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
654	2035	Bureau Direct	Historical	64,000	1.878%	1,202	-	-	1,202
655	2035	Corps	Historical	56,000	3.189%	1,786	-	-	1,786
656	2035	Replacements	Historical	3,276,531	4.430%	145,150	-	-	145,150

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
657	2035	Replacements	New	218,435	2.215%	4,838	-	-	4,838
658	2035	Float	Historical	-	-	(2,068)	-	-	(2,068)
659	FY 2035	Subtotal:		4,279,461		172,984	-	-	172,984
660	2036	Albeni Falls	Historical	57	4.375%	2	-	-	2
661	2036	Boise	Historical	64	4.875%	3	-	-	3
662	2036	Bonneville Dam	Historical	14,877	4.839%	720	-	-	720
663	2036	Chief Joseph	Historical	3,510	4.869%	171	-	-	171
664	2036	Columbia Basin	Historical	4,344	3.721%	162	-	-	162
665	2036	Columbia River Fish Mitigation	Historical	195,458	3.088%	6,036	-	-	6,036
666	2036	Cougar	Historical	4,088	2.875%	118	-	-	118
667	2036	Detroit Lake/Big Cliff	Historical	528	2.875%	15	-	-	15
668	2036	Dworshak	Historical	10	4.877%		-	-	
669	2036	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
670	2036	Ice Harbor	Historical	14	4.874%	1	-	-	1
671	2036	John Day	Historical	1,565	4.358%	68	-	-	68
672	2036	Libby	Historical	1,567	4.875%	76	-	-	76
673	2036	Little Goose	Historical	79	3.203%	3	-	-	3
674	2036	Lower Granite	Historical	24	4.875%	1	-	-	1
675	2036	Lower Monument	Historical	9	4.871%		-	-	
676	2036	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
677	2036	McNary	Historical	1,215	3.229%	39	-	-	39
678	2036	The Dalles	Historical	1,651	4.875%	80	-	-	80
679	2036	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
680	2036	Bureau Direct	Historical	32,479	0.363%	118	-	(39)	79
681	2036	Corps	Historical	2,396	0.434%	10	-	(2)	9
682	2036	Replacements	Historical	3,494,966	4.215%	147,324	-	-	147,324
683	2036	Replacements	New	218,435	2.215%	4,838	-	-	4,838
684	2036	Float	Historical	-	-	(2,154)	-	-	(2,154)
685	FY 2036	Subtotal:		3,977,563		157,643	-	(41)	157,603
686	2037	Albeni Falls	Historical	57	4.375%	2	-	-	2
687	2037	Boise	Historical	64	4.875%	3	-	-	3
688	2037	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
689	2037	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
690	2037	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
691	2037	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
692	2037	Dworshak	Historical	10	4.877%		-	-	
693	2037	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
694	2037	Ice Harbor	Historical	14	4.874%	1	-	-	1
695	2037	John Day	Historical	1,548	4.375%	68	-	-	68
696	2037	Libby	Historical	1,567	4.875%	76	-	-	76
697	2037	Little Goose	Historical	13	4.877%	1	-	-	1
698	2037	Lower Granite	Historical	24	4.875%	1	-	-	1
699	2037	Lower Monument	Historical	9	4.871%		-	-	
700	2037	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
701	2037	McNary	Historical	215	4.875%	10	-	-	10
702	2037	The Dalles	Historical	1,651	4.875%	80	-	-	80
703	2037	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
704	2037	Replacements	Historical	3,374,651	4.056%	136,883	-	-	136,883
705	2037	Replacements	New	218,435	2.215%	4,838	-	-	4,838
706	2037	Float	Historical	-	-	(2,165)	-	-	(2,165)
707	FY 2037	Subtotal:		3,655,320		142,575	-	-	142,575
708	2038	Albeni Falls	Historical	57	4.375%	2	-	-	2
709	2038	Boise	Historical	64	4.875%	3	-	-	3
710	2038	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
711	2038	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
712	2038	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
713	2038	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
714	2038	Dworshak	Historical	10	4.877%		-	-	
715	2038	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
716	2038	Ice Harbor	Historical	14	4.874%	1	-	-	1
717	2038	John Day	Historical	1,548	4.375%	68	-	-	68
718	2038	Libby	Historical	1,567	4.875%	76	-	-	76
719	2038	Little Goose	Historical	13	4.877%	1	-	-	1
720	2038	Lower Granite	Historical	24	4.875%	1	-	-	1
721	2038	Lower Monument	Historical	9	4.871%		-	-	

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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
722	2038	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
723	2038	McNary	Historical	215	4.875%	10	-	-	10
724	2038	The Dalles	Historical	1,651	4.875%	80	-	-	80
725	2038	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
726	2038	Replacements	Historical	3,023,595	3.982%	120,393	-	-	120,393
727	2038	Replacements	New	218,435	2.215%	4,838	-	-	4,838
728	2038	Float	Historical	-	-	(2,224)	-	-	(2,224)
729	FY 2038	Subtotal:		3,304,265		126,026	-	-	126,026
730	2039	Albeni Falls	Historical	57	4.375%	2	-	-	2
731	2039	Boise	Historical	64	4.875%	3	-	-	3
732	2039	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
733	2039	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
734	2039	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
735	2039	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
736	2039	Dworshak	Historical	10	4.877%		-	-	
737	2039	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
738	2039	Ice Harbor	Historical	14	4.874%	1	-	-	1
739	2039	John Day	Historical	1,548	4.375%	68	-	-	68
740	2039	Libby	Historical	1,567	4.875%	76	-	-	76
741	2039	Little Goose	Historical	13	4.877%	1	-	-	1
742	2039	Lower Granite	Historical	24	4.875%	1	-	-	1
743	2039	Lower Monument	Historical	9	4.871%		-	-	
744	2039	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
745	2039	McNary	Historical	215	4.875%	10	-	-	10
746	2039	The Dalles	Historical	1,651	4.875%	80	-	-	80
747	2039	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
748	2039	Replacements	Historical	2,630,190	3.884%	102,158	-	-	102,158
749	2039	Replacements	New	218,435	2.215%	4,838	-	-	4,838
750	2039	Float	Historical	-	-	(2,360)	-	-	(2,360)
751	FY 2039	Subtotal:		2,910,860		107,656	-	-	107,656
752	2040	Albeni Falls	Historical	57	4.375%	2	-	-	2
753	2040	Boise	Historical	64	4.875%	3	-	-	3
754	2040	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
755	2040	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
756	2040	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
757	2040	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
758	2040	Dworshak	Historical	10	4.877%		-	-	
759	2040	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
760	2040	Ice Harbor	Historical	14	4.874%	1	-	-	1
761	2040	John Day	Historical	1,548	4.375%	68	-	-	68
762	2040	Libby	Historical	1,567	4.875%	76	-	-	76
763	2040	Little Goose	Historical	13	4.877%	1	-	-	1
764	2040	Lower Granite	Historical	24	4.875%	1	-	-	1
765	2040	Lower Monument	Historical	9	4.871%		-	-	
766	2040	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
767	2040	McNary	Historical	215	4.875%	10	-	-	10
768	2040	The Dalles	Historical	1,651	4.875%	80	-	-	80
769	2040	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
770	2040	Replacements	Historical	2,200,364	3.741%	82,311	-	-	82,311
771	2040	Replacements	New	218,435	2.215%	4,838	-	-	4,838
772	2040	Float	Historical	-	-	(2,399)	-	-	(2,399)
773	FY 2040	Subtotal:		2,481,033		87,770	-	-	87,770
774	2041	Albeni Falls	Historical	57	4.375%	2	-	-	2
775	2041	Boise	Historical	64	4.875%	3	-	-	3
776	2041	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
777	2041	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
778	2041	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
779	2041	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
780	2041	Dworshak	Historical	10	4.877%		-	-	
781	2041	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
782	2041	Ice Harbor	Historical	14	4.874%	1	-	-	1
783	2041	John Day	Historical	1,548	4.375%	68	-	-	68
784	2041	Libby	Historical	1,567	4.875%	76	-	-	76
785	2041	Little Goose	Historical	13	4.877%	1	-	-	1
786	2041	Lower Granite	Historical	24	4.875%	1	-	-	1
787	2041	Lower Monument	Historical	9	4.871%		-	-	

TABLE 13C:
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	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
788	2041	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
789	2041	McNary	Historical	215	4.875%	10	-	-	10
790	2041	The Dalles	Historical	1,651	4.875%	80	-	-	80
791	2041	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
792	2041	Replacements	Historical	1,734,160	3.519%	61,032	-	-	61,032
793	2041	Replacements	New	218,435	2.215%	4,838	-	-	4,838
794	2041	Float	Historical	-	-	(2,456)	-	-	(2,456)
795	FY 2041	Subtotal:		2,014,830		66,433	-	-	66,433
796	2042	Albeni Falls	Historical	57	4.375%	2	-	-	2
797	2042	Boise	Historical	64	4.875%	3	-	-	3
798	2042	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
799	2042	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
800	2042	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
801	2042	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
802	2042	Dworshak	Historical	10	4.877%		-	-	
803	2042	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
804	2042	Ice Harbor	Historical	14	4.874%	1	-	-	1
805	2042	John Day	Historical	1,548	4.375%	68	-	-	68
806	2042	Libby	Historical	1,567	4.875%	76	-	-	76
807	2042	Little Goose	Historical	13	4.877%	1	-	-	1
808	2042	Lower Granite	Historical	24	4.875%	1	-	-	1
809	2042	Lower Monument	Historical	9	4.871%		-	-	
810	2042	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
811	2042	McNary	Historical	215	4.875%	10	-	-	10
812	2042	The Dalles	Historical	1,651	4.875%	80	-	-	80
813	2042	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
814	2042	Replacements	Historical	1,239,687	3.251%	40,299	-	-	40,299
815	2042	Replacements	New	218,435	2.215%	4,838	-	-	4,838
816	2042	Float	Historical	-	-	(2,492)	-	-	(2,492)
817	FY 2042	Subtotal:		1,520,357		45,663	-	-	45,663
818	2043	Albeni Falls	Historical	57	4.375%	2	-	-	2
819	2043	Boise	Historical	64	4.875%	3	-	-	3
820	2043	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
821	2043	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
822	2043	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
823	2043	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
824	2043	Dworshak	Historical	10	4.877%		-	-	
825	2043	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
826	2043	Ice Harbor	Historical	14	4.874%	1	-	-	1
827	2043	John Day	Historical	1,548	4.375%	68	-	-	68
828	2043	Libby	Historical	1,567	4.875%	76	-	-	76
829	2043	Little Goose	Historical	13	4.877%	1	-	-	1
830	2043	Lower Granite	Historical	24	4.875%	1	-	-	1
831	2043	Lower Monument	Historical	9	4.871%		-	-	
832	2043	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
833	2043	McNary	Historical	215	4.875%	10	-	-	10
834	2043	The Dalles	Historical	1,651	4.875%	80	-	-	80
835	2043	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
836	2043	Replacements	Historical	798,102	2.334%	18,624	-	-	18,624
837	2043	Replacements	New	218,435	2.215%	4,838	-	-	4,838
838	2043	Float	Historical	-	-	(2,525)	-	-	(2,525)
839	FY 2043	Subtotal:		1,078,772		23,956	-	-	23,956
840	2044	Albeni Falls	Historical	57	4.375%	2	-	-	2
841	2044	Boise	Historical	64	4.875%	3	-	-	3
842	2044	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
843	2044	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
844	2044	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
845	2044	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
846	2044	Dworshak	Historical	10	4.877%		-	-	
847	2044	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
848	2044	Ice Harbor	Historical	14	4.874%	1	-	-	1
849	2044	John Day	Historical	1,548	4.375%	68	-	-	68
850	2044	Libby	Historical	1,567	4.875%	76	-	-	76
851	2044	Little Goose	Historical	13	4.877%	1	-	-	1
852	2044	Lower Granite	Historical	24	4.875%	1	-	-	1
853	2044	Lower Monument	Historical	9	4.871%		-	-	

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	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
854	2044	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
855	2044	McNary	Historical	215	4.875%	10	-	-	10
856	2044	The Dalles	Historical	1,651	4.875%	80	-	-	80
857	2044	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
858	2044	Replacements	Historical	261,149	2.215%	5,784	-	-	5,784
859	2044	Replacements	New	218,435	2.215%	4,838	-	-	4,838
860	2044	Float	Historical	-	-	(2,172)	-	-	(2,172)
861	FY 2044	Subtotal:		541,818		11,469	-	-	11,469
862	2045	Albeni Falls	Historical	57	4.375%	2	-	-	2
863	2045	Boise	Historical	64	4.875%	3	-	-	3
864	2045	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
865	2045	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
866	2045	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
867	2045	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
868	2045	Dworshak	Historical	10	4.877%		-	-	
869	2045	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
870	2045	Ice Harbor	Historical	14	4.874%	1	-	-	1
871	2045	John Day	Historical	1,548	4.375%	68	-	-	68
872	2045	Libby	Historical	1,567	4.875%	76	-	-	76
873	2045	Little Goose	Historical	13	4.877%	1	-	-	1
874	2045	Lower Granite	Historical	24	4.875%	1	-	-	1
875	2045	Lower Monument	Historical	9	4.871%		-	-	
876	2045	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
877	2045	McNary	Historical	215	4.875%	10	-	-	10
878	2045	The Dalles	Historical	1,651	4.875%	80	-	-	80
879	2045	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
880	2045	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
881	2045	Replacements	New	218,435	2.215%	4,838	-	-	4,838
882	2045	Float	Historical	-	-	(1,008)	-	-	(1,008)
883	FY 2045	Subtotal:		499,105		11,687	-	-	11,687
884	2046	Albeni Falls	Historical	57	4.375%	2	-	-	2
885	2046	Boise	Historical	64	4.875%	3	-	-	3
886	2046	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
887	2046	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
888	2046	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
889	2046	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
890	2046	Dworshak	Historical	10	4.877%		-	-	
891	2046	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
892	2046	Ice Harbor	Historical	14	4.874%	1	-	-	1
893	2046	John Day	Historical	1,548	4.375%	68	-	-	68
894	2046	Libby	Historical	1,567	4.875%	76	-	-	76
895	2046	Little Goose	Historical	13	4.877%	1	-	-	1
896	2046	Lower Granite	Historical	24	4.875%	1	-	-	1
897	2046	Lower Monument	Historical	9	4.871%		-	-	
898	2046	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
899	2046	McNary	Historical	215	4.875%	10	-	-	10
900	2046	The Dalles	Historical	1,651	4.875%	80	-	-	80
901	2046	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
902	2046	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
903	2046	Replacements	New	218,435	2.215%	4,838	-	-	4,838
904	2046	Float	Historical	-	-	(1,008)	-	-	(1,008)
905	FY 2046	Subtotal:		499,105		11,687	-	-	11,687
906	2047	Albeni Falls	Historical	57	4.375%	2	-	-	2
907	2047	Boise	Historical	64	4.875%	3	-	-	3
908	2047	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
909	2047	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
910	2047	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
911	2047	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
912	2047	Dworshak	Historical	10	4.877%		-	-	
913	2047	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
914	2047	Ice Harbor	Historical	14	4.874%	1	-	-	1
915	2047	John Day	Historical	1,548	4.375%	68	-	-	68
916	2047	Libby	Historical	1,567	4.875%	76	-	-	76
917	2047	Little Goose	Historical	13	4.877%	1	-	-	1
918	2047	Lower Granite	Historical	24	4.875%	1	-	-	1

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
919	2047	Lower Monument	Historical	9	4.871%		-	-	
920	2047	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
921	2047	McNary	Historical	215	4.875%	10	-	-	10
922	2047	The Dalles	Historical	1,651	4.875%	80	-	-	80
923	2047	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
924	2047	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
925	2047	Replacements	New	218,435	2.215%	4,838	-	-	4,838
926	2047	Float	Historical	-	-	(1,008)	-	-	(1,008)
927	FY 2047	Subtotal:		499,105		11,687	-	-	11,687
928	2048	Albeni Falls	Historical	57	4.375%	2	-	-	2
929	2048	Boise	Historical	64	4.875%	3	-	-	3
930	2048	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
931	2048	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
932	2048	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
933	2048	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
934	2048	Dworshak	Historical	10	4.877%		-	-	
935	2048	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
936	2048	Ice Harbor	Historical	14	4.874%	1	-	-	1
937	2048	John Day	Historical	1,548	4.375%	68	-	-	68
938	2048	Libby	Historical	1,567	4.875%	76	-	-	76
939	2048	Little Goose	Historical	13	4.877%	1	-	-	1
940	2048	Lower Granite	Historical	24	4.875%	1	-	-	1
941	2048	Lower Monument	Historical	9	4.871%		-	-	
942	2048	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
943	2048	McNary	Historical	215	4.875%	10	-	-	10
944	2048	The Dalles	Historical	1,651	4.875%	80	-	-	80
945	2048	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
946	2048	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
947	2048	Replacements	New	218,435	2.215%	4,838	-	-	4,838
948	2048	Float	Historical	-	-	(1,008)	-	-	(1,008)
949	FY 2048	Subtotal:		499,105		11,687	-	-	11,687
950	2049	Albeni Falls	Historical	57	4.375%	2	-	-	2
951	2049	Boise	Historical	64	4.875%	3	-	-	3
952	2049	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
953	2049	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
954	2049	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
955	2049	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
956	2049	Dworshak	Historical	10	4.877%		-	-	
957	2049	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
958	2049	Ice Harbor	Historical	14	4.874%	1	-	-	1
959	2049	John Day	Historical	1,548	4.375%	68	-	-	68
960	2049	Libby	Historical	1,567	4.875%	76	-	-	76
961	2049	Little Goose	Historical	13	4.877%	1	-	-	1
962	2049	Lower Granite	Historical	24	4.875%	1	-	-	1
963	2049	Lower Monument	Historical	9	4.871%		-	-	
964	2049	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
965	2049	McNary	Historical	215	4.875%	10	-	-	10
966	2049	The Dalles	Historical	1,651	4.875%	80	-	-	80
967	2049	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
968	2049	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
969	2049	Replacements	New	218,435	2.215%	4,838	-	-	4,838
970	2049	Float	Historical	-	-	(1,008)	-	-	(1,008)
971	FY 2049	Subtotal:		499,105		11,687	-	-	11,687

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
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(\$000s) (FY 2019)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
972	2050 Albeni Falls	Historical	57	4.375%	2	-	-	2
973	2050 Boise	Historical	64	4.875%	3	-	-	3
974	2050 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
975	2050 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
976	2050 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
977	2050 Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
978	2050 Dworshak	Historical	10	4.877%		-	-	
979	2050 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
980	2050 Ice Harbor	Historical	14	4.874%	1	-	-	1
981	2050 John Day	Historical	1,548	4.375%	68	-	-	68
982	2050 Libby	Historical	1,567	4.875%	76	-	-	76
983	2050 Little Goose	Historical	13	4.877%	1	-	-	1
984	2050 Lower Granite	Historical	24	4.875%	1	-	-	1
985	2050 Lower Monument	Historical	9	4.871%		-	-	
986	2050 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
987	2050 McNary	Historical	215	4.875%	10	-	-	10
988	2050 The Dalles	Historical	1,651	4.875%	80	-	-	80
989	2050 Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
990	2050 Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
991	2050 Replacements	New	218,435	2.215%	4,838	-	-	4,838
992	2050 Float	Historical	-	-	(1,008)	-	-	(1,008)
993	FY 2050	Subtotal:	499,105		11,687	-	-	11,687
994	2051 Albeni Falls	Historical	57	4.375%	2	-	-	2
995	2051 Boise	Historical	64	4.875%	3	-	-	3
996	2051 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
997	2051 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
998	2051 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
999	2051 Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1000	2051 Dworshak	Historical	10	4.877%		-	-	
1001	2051 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1002	2051 Ice Harbor	Historical	14	4.874%	1	-	-	1
1003	2051 John Day	Historical	1,548	4.375%	68	-	-	68
1004	2051 Libby	Historical	1,567	4.875%	76	-	-	76
1005	2051 Little Goose	Historical	13	4.877%	1	-	-	1
1006	2051 Lower Granite	Historical	24	4.875%	1	-	-	1
1007	2051 Lower Monument	Historical	9	4.871%		-	-	
1008	2051 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1009	2051 McNary	Historical	215	4.875%	10	-	-	10
1010	2051 The Dalles	Historical	1,651	4.875%	80	-	-	80
1011	2051 Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1012	2051 Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1013	2051 Replacements	New	218,435	2.215%	4,838	-	-	4,838
1014	2051 Float	Historical	-	-	(1,008)	-	-	(1,008)
1015	FY 2051	Subtotal:	499,105		11,687	-	-	11,687
1016	2052 Albeni Falls	Historical	57	4.375%	2	-	-	2
1017	2052 Boise	Historical	64	4.875%	3	-	-	3
1018	2052 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1019	2052 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1020	2052 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1021	2052 Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1022	2052 Dworshak	Historical	10	4.877%		-	-	
1023	2052 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1024	2052 Ice Harbor	Historical	14	4.874%	1	-	-	1
1025	2052 John Day	Historical	1,548	4.375%	68	-	-	68
1026	2052 Libby	Historical	1,567	4.875%	76	-	-	76
1027	2052 Little Goose	Historical	13	4.877%	1	-	-	1
1028	2052 Lower Granite	Historical	24	4.875%	1	-	-	1
1029	2052 Lower Monument	Historical	9	4.871%		-	-	
1030	2052 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1031	2052 McNary	Historical	215	4.875%	10	-	-	10
1032	2052 The Dalles	Historical	1,651	4.875%	80	-	-	80
1033	2052 Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1034	2052 Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1035	2052 Replacements	New	218,435	2.215%	4,838	-	-	4,838
1036	2052 Float	Historical	-	-	(1,008)	-	-	(1,008)
1037	FY 2052	Subtotal:	499,105		11,687	-	-	11,687

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
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(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1038	2053	Albeni Falls	Historical	57	4.375%	2	-	-	2
1039	2053	Boise	Historical	64	4.875%	3	-	-	3
1040	2053	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1041	2053	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1042	2053	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1043	2053	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1044	2053	Dworshak	Historical	10	4.877%		-	-	
1045	2053	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1046	2053	Ice Harbor	Historical	14	4.874%	1	-	-	1
1047	2053	John Day	Historical	1,548	4.375%	68	-	-	68
1048	2053	Libby	Historical	1,567	4.875%	76	-	-	76
1049	2053	Little Goose	Historical	13	4.877%	1	-	-	1
1050	2053	Lower Granite	Historical	24	4.875%	1	-	-	1
1051	2053	Lower Monument	Historical	9	4.871%		-	-	
1052	2053	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1053	2053	McNary	Historical	215	4.875%	10	-	-	10
1054	2053	The Dalles	Historical	1,651	4.875%	80	-	-	80
1055	2053	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1056	2053	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1057	2053	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1058	2053	Float	Historical	-	-	(1,008)	-	-	(1,008)
1059	FY 2053	Subtotal:		499,105		11,687	-	-	11,687
1060	2054	Albeni Falls	Historical	57	4.375%	2	-	-	2
1061	2054	Boise	Historical	64	4.875%	3	-	-	3
1062	2054	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1063	2054	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1064	2054	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1065	2054	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1066	2054	Dworshak	Historical	10	4.877%		-	-	
1067	2054	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1068	2054	Ice Harbor	Historical	14	4.874%	1	-	-	1
1069	2054	John Day	Historical	1,548	4.375%	68	-	-	68
1070	2054	Libby	Historical	1,567	4.875%	76	-	-	76
1071	2054	Little Goose	Historical	13	4.877%	1	-	-	1
1072	2054	Lower Granite	Historical	24	4.875%	1	-	-	1
1073	2054	Lower Monument	Historical	9	4.871%		-	-	
1074	2054	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1075	2054	McNary	Historical	215	4.875%	10	-	-	10
1076	2054	The Dalles	Historical	1,651	4.875%	80	-	-	80
1077	2054	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1078	2054	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1079	2054	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1080	2054	Float	Historical	-	-	(1,008)	-	-	(1,008)
1081	FY 2054	Subtotal:		499,105		11,687	-	-	11,687
1082	2055	Albeni Falls	Historical	57	4.375%	2	-	-	2
1083	2055	Boise	Historical	64	4.875%	3	-	-	3
1084	2055	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1085	2055	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1086	2055	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1087	2055	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1088	2055	Dworshak	Historical	10	4.877%		-	-	
1089	2055	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1090	2055	Ice Harbor	Historical	14	4.874%	1	-	-	1
1091	2055	John Day	Historical	1,548	4.375%	68	-	-	68
1092	2055	Libby	Historical	1,567	4.875%	76	-	-	76
1093	2055	Little Goose	Historical	13	4.877%	1	-	-	1
1094	2055	Lower Granite	Historical	24	4.875%	1	-	-	1
1095	2055	Lower Monument	Historical	9	4.871%		-	-	
1096	2055	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1097	2055	McNary	Historical	215	4.875%	10	-	-	10
1098	2055	The Dalles	Historical	1,651	4.875%	80	-	-	80
1099	2055	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1100	2055	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1101	2055	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1102	2055	Float	Historical	-	-	(1,008)	-	-	(1,008)
1103	FY 2055	Subtotal:		499,105		11,687	-	-	11,687

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1104	2056	Albeni Falls	Historical	57	4.375%	2	-	-	2
1105	2056	Boise	Historical	64	4.875%	3	-	-	3
1106	2056	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1107	2056	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1108	2056	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1109	2056	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1110	2056	Dworshak	Historical	10	4.877%		-	-	
1111	2056	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1112	2056	Ice Harbor	Historical	14	4.874%	1	-	-	1
1113	2056	John Day	Historical	1,548	4.375%	68	-	-	68
1114	2056	Libby	Historical	1,567	4.875%	76	-	-	76
1115	2056	Little Goose	Historical	13	4.877%	1	-	-	1
1116	2056	Lower Granite	Historical	24	4.875%	1	-	-	1
1117	2056	Lower Monument	Historical	9	4.871%		-	-	
1118	2056	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1119	2056	McNary	Historical	215	4.875%	10	-	-	10
1120	2056	The Dalles	Historical	1,651	4.875%	80	-	-	80
1121	2056	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1122	2056	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1123	2056	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1124	2056	Float	Historical	-	-	(1,008)	-	-	(1,008)
1125	FY 2056	Subtotal:		499,105		11,687	-	-	11,687
1126	2057	Albeni Falls	Historical	57	4.375%	2	-	-	2
1127	2057	Boise	Historical	64	4.875%	3	-	-	3
1128	2057	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1129	2057	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1130	2057	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1131	2057	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1132	2057	Dworshak	Historical	10	4.877%		-	-	
1133	2057	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1134	2057	Ice Harbor	Historical	14	4.874%	1	-	-	1
1135	2057	John Day	Historical	1,548	4.375%	68	-	-	68
1136	2057	Libby	Historical	1,567	4.875%	76	-	-	76
1137	2057	Little Goose	Historical	13	4.877%	1	-	-	1
1138	2057	Lower Granite	Historical	24	4.875%	1	-	-	1
1139	2057	Lower Monument	Historical	9	4.871%		-	-	
1140	2057	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1141	2057	McNary	Historical	215	4.875%	10	-	-	10
1142	2057	The Dalles	Historical	1,651	4.875%	80	-	-	80
1143	2057	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1144	2057	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1145	2057	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1146	2057	Float	Historical	-	-	(1,008)	-	-	(1,008)
1147	FY 2057	Subtotal:		499,105		11,687	-	-	11,687
1148	2058	Albeni Falls	Historical	57	4.375%	2	-	-	2
1149	2058	Boise	Historical	64	4.875%	3	-	-	3
1150	2058	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1151	2058	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1152	2058	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1153	2058	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1154	2058	Dworshak	Historical	10	4.877%		-	-	
1155	2058	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1156	2058	Ice Harbor	Historical	14	4.874%	1	-	-	1
1157	2058	John Day	Historical	1,548	4.375%	68	-	-	68
1158	2058	Libby	Historical	1,567	4.875%	76	-	-	76
1159	2058	Little Goose	Historical	13	4.877%	1	-	-	1
1160	2058	Lower Granite	Historical	24	4.875%	1	-	-	1
1161	2058	Lower Monument	Historical	9	4.871%		-	-	
1162	2058	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1163	2058	McNary	Historical	215	4.875%	10	-	-	10
1164	2058	The Dalles	Historical	1,651	4.875%	80	-	-	80
1165	2058	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1166	2058	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1167	2058	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1168	2058	Float	Historical	-	-	(1,008)	-	-	(1,008)
1169	FY 2058	Subtotal:		499,105		11,687	-	-	11,687
1170	2059	Albeni Falls	Historical	57	4.375%	2	-	-	2

TABLE 13C:
Interest Calculation Summary, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1171	2059	Columbia Basin	Historical	1,338	4.375%	59	-	-	59
1172	2059	Hungry Horse Dam	Historical	60	4.376%	3	-	-	3
1173	2059	John Day	Historical	1,548	4.375%	68	-	-	68
1174	2059	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
1175	2059	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1176	2059	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1177	2059	Float	Historical	-	-	(1,008)	-	-	(1,008)
1178	FY 2059	Subtotal:		439,889		8,800	-	-	8,800
1179	2060	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1180	2060	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1181	2060	Float	Historical	-	-	(1,008)	-	-	(1,008)
1182	FY 2060	Subtotal:		436,871		8,668	-	-	8,668
1183	2061	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1184	2061	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1185	2061	Float	Historical	-	-	(1,008)	-	-	(1,008)
1186	FY 2061	Subtotal:		436,871		8,668	-	-	8,668
1187	2062	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1188	2062	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1189	2062	Float	Historical	-	-	(1,008)	-	-	(1,008)
1190	FY 2062	Subtotal:		436,871		8,668	-	-	8,668
1191	2063	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1192	2063	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1193	2063	Float	Historical	-	-	(1,008)	-	-	(1,008)
1194	FY 2063	Subtotal:		436,871		8,668	-	-	8,668
1195	2064	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1196	2064	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1197	2064	Float	Historical	-	-	(1,008)	-	-	(1,008)
1198	FY 2064	Subtotal:		436,871		8,668	-	-	8,668
1199	2065	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1200	2065	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1201	2065	Float	Historical	-	-	(1,008)	-	-	(1,008)
1202	FY 2065	Subtotal:		436,871		8,668	-	-	8,668
1203	2066	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1204	2066	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1205	2066	Float	Historical	-	-	(1,008)	-	-	(1,008)
1206	FY 2066	Subtotal:		436,871		8,668	-	-	8,668
1207	2067	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1208	2067	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1209	2067	Float	Historical	-	-	(1,008)	-	-	(1,008)
1210	FY 2067	Subtotal:		436,871		8,668	-	-	8,668
1211	2068	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1212	2068	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1213	2068	Float	Historical	-	-	(1,008)	-	-	(1,008)
1214	FY 2068	Subtotal:		436,871		8,668	-	-	8,668
1215	2069	Replacements	Historical	218,435	2.215%	4,838	-	-	4,838
1216	2069	Replacements	New	218,435	2.215%	4,838	-	-	4,838
1217	2069	Float	Historical	-	-	(1,008)	-	-	(1,008)
1218	FY 2069	Subtotal:		436,871		8,668	-	-	8,668
1219	Grand Total:			127,052,919		4,511,470	-	(10,729)	4,500,741

TABLE 13D
Application of Amortization, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
1	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1983	9/30/2033	30,488	9,472	7.150%	7.150%				9,472		
2	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1986	9/30/2033	30,578	21,534	7.150%	7.150%				21,534		
3	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1987	9/30/2033	2,801	2,801	7.150%	7.150%				2,801		
4	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1988	9/30/2033	1,271	1,271	7.150%	7.150%				1,271		
5	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1989	9/30/2033	1,232	1,232	7.150%	7.150%				1,232		
6	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1990	9/30/2033	1,588	1,588	7.150%	7.150%				1,588		
7	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1985	9/30/2035	47,921	47,921	7.150%	7.150%				47,921		
8	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	22	22	7.150%	7.150%				22		
9	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	52	52	7.150%	7.150%				52		
10	2017	John Day	Corps of Engineers	9/30/1995	9/30/2035	121	121	7.150%	7.150%				121		
11	2017	Lower Monument	Corps of Engineers	9/30/1996	9/30/2036	264	264	7.150%	7.150%				264		
12	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1987	9/30/2037	72,536	72,536	7.150%	7.150%				72,536		
13	2017	Libby	Corps of Engineers	9/30/1988	9/30/2038	18,043	14,781	7.150%	7.150%				14,781		
14	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1988	9/30/2038	805	805	7.150%	7.150%				805		
15	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1990	9/30/2040	1,557	1,557	7.150%	7.150%				1,557		
16	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	17	17	7.150%	7.150%				17		
17	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	450	450	7.150%	7.150%				450		
18	2017	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	733	733	7.150%	7.150%				733		
19	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1991	9/30/2041	4,411	4,411	7.150%	7.150%				4,411		
20	2017	Ice Harbor	Corps of Engineers	9/30/1996	9/30/2041	371	371	7.150%	7.150%				371		
21	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1993	9/30/2043	71,632	71,632	7.150%	7.150%				71,632		
22	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1994	9/30/2044	5,700	5,700	7.150%	7.150%				5,700		
23	2017	Chief Joseph	Corps of Engineers	9/30/1994	9/30/2044	4,280	4,017	7.150%	7.150%				4,017		
24	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1994	9/30/2044	4,722	4,722	7.150%	7.150%				4,722		
25	2017	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1994	9/30/2044	12,631	12,631	7.150%	7.150%				12,631		
26	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1995	9/30/2045	3,791	3,791	7.150%	7.150%				3,791		
27	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/1995	9/30/2045	43,343	39,282	7.150%	7.150%				39,282		
28	2017	Detroit Lake/Big Cliff	Corps of Engineers	9/30/1995	9/30/2045	38	38	7.150%	7.150%				38		
29	2017	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	80	39	7.150%	7.150%				39		
30	2017	Lost Creek	Corps of Engineers	9/30/1995	9/30/2045	94	94	7.150%	7.150%				94		
31	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	41	41	7.150%	7.150%				41		
32	2017	McNary	Corps of Engineers	9/30/1995	9/30/2045	16	16	7.150%	7.150%				16		
33	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	443	443	7.150%	7.150%				443		
34	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	147	147	7.150%	7.150%				147		
35	2017	Dworshak	Corps of Engineers	9/30/1995	9/30/2045	1,162	1,162	7.150%	7.150%				1,162		
36	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	37	37	7.150%	7.150%				37		
37	2017	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	33	33	7.150%	7.150%				33		
38	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	99	99	7.150%	7.150%				99		
39	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	531	531	7.150%	7.150%				531		
40	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	562	562	7.150%	7.150%				562		
41	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	624	624	7.150%	7.150%				624		
42	2017	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	1,105	1,105	7.150%	7.150%				1,105		
43	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	243	243	7.150%	7.150%				243		
44	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	712	712	7.150%	7.150%				712		
45	2017	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	287	287	7.150%	7.150%				287		
46	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1995	9/30/2045	6,190	6,190	7.150%	7.150%				6,190		
47	2017	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	1,122	1,122	7.150%	7.150%				1,122		
48	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	410	410	7.150%	7.150%				410		
49	2017	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	784	784	7.150%	7.150%				784		
50	2017	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	2,511	2,453	7.150%	7.150%				2,453		
51	2017	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	440	440	7.150%	7.150%				440		
52	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	608	608	7.150%	7.150%				608		
53	2017	John Day	Corps of Engineers	9/30/1995	9/30/2045	7,653	7,653	7.150%	7.150%				7,653		
54	2017	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	442	442	7.150%	7.150%				442		
55	2017	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1996	9/30/2046	376	376	7.150%	7.150%				376		

TABLE 13D
Application of Amortization, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
56	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18		
57	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3		
58	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/1996	9/30/2046	2,431	2,431	7.150%	7.150%				2,431		
59	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3		
60	2017	Green Peter/Foster	Corps of Engineers	9/30/1996	9/30/2046	26	26	7.150%	7.150%				26		
61	2017	Hills Creek	Corps of Engineers	9/30/1996	9/30/2046	28	28	7.150%	7.150%				28		
62	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	15	15	7.150%	7.150%				15		
63	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10		
64	2017	Lost Creek	Corps of Engineers	9/30/1996	9/30/2046	24	24	7.150%	7.150%				24		
65	2017	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	9	9	7.150%	7.150%				9		
66	2017	Lower Monument	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10		
67	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1996	9/30/2046	12,085	12,085	7.150%	7.150%				12,085		
68	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18		
69	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4		
70	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4		
71	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	2	2	7.150%	7.150%				2		
72	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10		
73	2017	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	656	656	7.150%	7.150%				656		
74	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	211	211	7.150%	7.150%				211		
75	2017	The Dalles	Corps of Engineers	9/30/1996	9/30/2046	1,991	1,991	7.150%	7.150%				1,991		
76	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	80	80	7.150%	7.150%				80		
77	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	355	355	7.150%	7.150%				355		
78	2017	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	426	426	7.150%	7.150%				426		
79	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	241	241	7.150%	7.150%				241		
80	2017	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	625	625	7.150%	7.150%				625		
81	2017	McNary	Corps of Engineers	9/30/1996	9/30/2046	619	619	7.150%	7.150%				619		
82	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	109	109	7.150%	7.150%				109		
83	2017	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	729	729	7.150%	7.150%				729		
84	2017	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	368	368	7.150%	7.150%				368		
85	2017	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	46	46	7.150%	7.150%				46		
86	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	520	520	7.150%	7.150%				520		
87	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	142	142	7.150%	7.150%				142		
88	2017	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	3,909	3,909	7.150%	7.150%				3,909		
89	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	223	223	7.150%	7.150%				223		
90	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	751	751	7.150%	7.150%				751		
91	2017	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	1,322	1,322	7.150%	7.150%				1,322		
92	2017	Albeni Falls	Corps of Engineers	9/30/1997	9/30/2047	431	431	7.150%	7.150%				431		
93	2017	Columbia Basin	Bureau of Reclamation	9/30/1997	9/30/2047	3,393	3,393	7.150%	7.150%				3,393		
94	2017	Cougar	Corps of Engineers	9/30/1997	9/30/2047	26	26	7.150%	7.150%				26		
95	2017	Dworshak	Corps of Engineers	9/30/1997	9/30/2047	7,588	7,588	7.150%	7.150%				7,588		
96	2017	Little Goose	Corps of Engineers	9/30/1997	9/30/2047	1	1	7.150%	7.150%				1		
97	2017	Lower Granite	Corps of Engineers	9/30/1997	9/30/2047	677	677	7.150%	7.150%				677		
98	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1997	9/30/2047	2,173	2,173	7.150%	7.150%				2,173		
99	2017	Boise	Bureau of Reclamation	9/30/1997	9/30/2047	2,266	2,266	7.150%	7.150%				2,266		
100	2017	Chief Joseph	Corps of Engineers	9/30/1997	9/30/2047	657	657	7.150%	7.150%				657		
101	2017	Hungry Horse Dam	Bureau of Reclamation	9/30/1997	9/30/2047	111	111	7.150%	7.150%				111		
102	2017	Ice Harbor	Corps of Engineers	9/30/1997	9/30/2047	67	67	7.150%	7.150%				67		
103	2017	John Day	Corps of Engineers	9/30/1997	9/30/2047	179	179	7.150%	7.150%				179		
104	2017	Libby	Corps of Engineers	9/30/1997	9/30/2047	660	660	7.150%	7.150%				660		
105	2017	Minidoka/Palispades	Bureau of Reclamation	9/30/1997	9/30/2047	50,911	50,911	7.150%	7.150%				50,911		
106	2017	Bonneville Dam	Corps of Engineers	9/30/1997	9/30/2047	161	161	7.150%	7.150%				161		
107	2017	Columbia River Fish Mitigation	Corps of Engineers	9/30/2000	9/30/2050	47,006	47,006	6.125%	6.125%				14,055		
108	2017	Hills Creek	Corps of Engineers	9/30/2000	9/30/2050	2,630	2,630	6.125%	6.125%				2,630		
109	2017	Ice Harbor	Corps of Engineers	9/30/2000	9/30/2050	548	548	6.125%	6.125%				548		
110	2017	John Day	Corps of Engineers	9/30/2000	9/30/2050	2,761	2,761	6.125%	6.125%				2,761		
111	2017	Lookout Dam	Corps of Engineers	9/30/2000	9/30/2050	5,098	5,098	6.125%	6.125%				5,098		
112	2017	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2000	9/30/2050	1,529	1,529	6.125%	6.125%				1,529		
113	2017	The Dalles	Corps of Engineers	9/30/2000	9/30/2050	2,588	2,588	6.125%	6.125%				2,588		
114		FY 2017 Subtotal:	-	-	-	547,635	509,890						476,940		

TABLE 13D
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(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
115	2018	Construction (AS)	-	6/30/2013	6/30/2017	3,000	3,000	1.271%	0.750%				3,000		
116	2018	Construction (AS)	-	8/31/2013	8/31/2017	2,000	2,000	1.494%	0.750%	Global	42978	43343	0.75	2,000	
117	2018	Construction (AS)	-	9/30/2015	9/30/2017	7,700	7,700	0.744%	0.750%	Global	43008	43373	0.75	7,700	
118	2018	Construction (AS)	-	4/30/2017	1/31/2018	2,450	2,450	1.051%	1.051%					2,450	
119	2018	Conservation	-	1/31/2013	1/31/2018	9,000	9,000	1.107%	1.107%					9,000	
120	2018	Conservation	-	4/30/2017	1/31/2018	20,000	20,000	1.051%	1.051%					20,000	
121	2018	Bonneville Dam	Corps of Engineers	9/30/2000	9/30/2050	24,446	24,446	6.125%	6.125%					24,446	
122	2018	Columbia River Fish Mitigation	Corps of Engineers	9/30/2000	9/30/2050	47,006	32,951	6.125%	6.125%					32,951	
123	2018	Columbia River Fish Mitigation	Corps of Engineers	9/30/2001	9/30/2051	6,168	6,168	5.875%	5.875%					3,315	
124	2018	Green Peter/Foster	Corps of Engineers	9/30/2001	9/30/2051	200	200	5.875%	5.875%					200	
125	2018	Hills Creek	Corps of Engineers	9/30/2001	9/30/2051	8	8	5.875%	5.875%					8	
126	2018	Hungry Horse Dam	Bureau of Reclamation	9/30/2001	9/30/2051	552	552	5.875%	5.875%					552	
127	2018	Ice Harbor	Corps of Engineers	9/30/2001	9/30/2051	764	764	5.875%	5.875%					764	
128	2018	John Day	Corps of Engineers	9/30/2001	9/30/2051	619	619	5.875%	5.875%					619	
129	2018	Libby	Corps of Engineers	9/30/2001	9/30/2051	5,562	5,562	5.875%	5.875%					5,562	
130	2018	Little Goose	Corps of Engineers	9/30/2001	9/30/2051	4,608	4,608	5.875%	5.875%					4,608	
131	2018	Lost Creek	Corps of Engineers	9/30/2001	9/30/2051	147	147	5.875%	5.875%					147	
132	2018	Lower Granite	Corps of Engineers	9/30/2001	9/30/2051	2,025	2,025	5.875%	5.875%					2,025	
133	2018	Lower Monument	Corps of Engineers	9/30/2001	9/30/2051	3,301	3,301	5.875%	5.875%					3,301	
134	2018	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2001	9/30/2051	325	325	5.875%	5.875%					325	
135	2018	McNary	Corps of Engineers	9/30/2001	9/30/2051	1,046	1,046	5.875%	5.875%					1,046	
136	2018	Midoka/Palisades	Bureau of Reclamation	9/30/2001	9/30/2051	42	42	5.875%	5.875%					42	
137	2018	RRP - Green Springs	Bureau of Reclamation	9/30/2001	9/30/2051	11,145	11,145	5.875%	5.875%					11,145	
138	2018	Yakima Roza	Bureau of Reclamation	9/30/2001	9/30/2051	15	14	5.875%	5.875%					14	
139		FY 2018 Subtotal:	-	-	-	152,129	138,073							135,220	
140	2019	Bureau Direct	-	10/31/2009	10/31/2018	24,000	24,000	3.719%	3.719%					24,000	
141	2019	Construction (AS)	-	11/30/2012	11/30/2018	5,250	5,250	1.109%	1.109%					5,250	
142	2019	Fish and Wildlife	-	12/31/2009	12/31/2018	26,000	26,000	4.069%	4.069%					26,000	
143	2019	Bureau Direct	-	1/16/2014	12/31/2018	43,000	43,000	1.943%	1.943%					43,000	
144	2019	Bureau Direct	-	1/16/2014	12/31/2018	38,000	38,000	1.943%	1.943%					38,000	
145	2019	Fish and Wildlife	-	8/31/2010	8/31/2019	20,000	20,000	2.646%	2.646%					20,000	
146	2019	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	69,226	5.875%	5.875%					14,236	
147	2019	Columbia River Fish Mitigation	Corps of Engineers	9/30/2001	9/30/2051	6,168	2,853	5.875%	5.875%					2,853	
148	2019	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2001	9/30/2051	282	282	5.875%	5.875%					282	
149		FY 2019 Subtotal:	-	-	-	231,926	228,611							173,622	
150	2020	Construction (AS)	-	10/31/2013	10/31/2019	4,200	4,200	2.039%	2.039%					4,200	
151	2020	Construction (AS)	-	10/31/2013	10/31/2019	5,000	5,000	2.039%	2.039%					5,000	
152	2020	Bureau Direct	-	10/31/2009	10/31/2019	20,000	20,000	3.842%	3.842%					20,000	
153	2020	Bureau Direct	-	11/30/2009	11/30/2019	7,000	7,000	3.637%	3.637%					7,000	
154	2020	Bureau Direct	-	12/31/2009	12/31/2019	13,000	13,000	4.194%	4.194%					13,000	
155	2020	Construction (AS)	-	1/31/2014	1/31/2020	1,750	1,750	2.183%	2.183%					1,750	
156	2020	Construction (AS)	-	1/31/2014	1/31/2020	2,000	2,000	2.183%	2.183%					2,000	
157	2020	Construction (AS)	-	4/30/2014	3/31/2020	1,400	1,400	0.947%	0.947%					1,400	
158	2020	Construction (AS)	-	4/30/2014	3/31/2020	2,000	2,000	0.947%	0.947%					2,000	
159	2020	Bureau Direct	-	3/31/2010	3/31/2020	30,000	30,000	4.083%	4.083%					30,000	
160	2020	Bureau Direct	-	4/30/2010	4/30/2020	18,000	18,000	3.973%	3.973%					18,000	
161	2020	Construction (AS)	-	5/31/2014	4/30/2020	700	700	0.526%	0.526%					700	
162	2020	Bureau Direct	-	5/31/2010	5/31/2020	15,000	15,000	3.574%	3.574%					15,000	
163	2020	Bureau Direct	-	7/31/2010	7/31/2020	17,000	17,000	3.118%	3.118%					17,000	
164	2020	Construction (AS)	-	7/31/2014	7/31/2020	1,050	1,050	0.674%	0.674%					1,050	
165	2020	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	54,989	5.875%	5.875%					6,543	
166		FY 2020 Subtotal:	-	-	-	207,326	193,089							144,643	
167	2021	Construction (AS)	-	11/30/2014	11/30/2020	2,100	2,100	1.809%	1.809%					2,100	
168	2021	Construction (AS)	-	12/31/2014	12/31/2020	1,050	1,050	1.922%	1.922%					1,050	
169	2021	Technology (G)	-	1/31/2015	1/31/2021	35,000	35,000	1.469%	1.469%					35,000	
170	2021	Bureau Direct	-	1/31/2009	1/31/2021	25,000	25,000	3.999%	3.999%					25,000	
171	2021	Construction (AS)	-	2/28/2015	2/28/2021	1,750	1,750	1.761%	1.761%					1,750	
172	2021	Construction (AS)	-	5/31/2015	5/31/2021	2,100	2,100	1.898%	1.898%					2,100	
173	2021	Conservation	-	5/31/2015	5/31/2021	5,000	5,000	1.898%	1.898%					5,000	

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
174	2021	Conservation	-	7/31/2015	7/31/2021	14,000	14,000	2.067%	2.067%				14,000		
175	2021	Bureau Direct	-	11/20/2013	9/30/2021	50,000	50,000	2.812%	2.812%				50,000		
176	2021	Bureau Direct	-	9/30/2010	9/30/2021	22,000	22,000	2.883%	2.883%				22,000		
177	2021	Columbia Basin	Bureau of Reclamation	9/30/2010	9/30/2051	69,226	48,446	5.875%	5.875%				2,140		
178		FY 2021 Subtotal:	-	-	-	227,226	206,446						160,140		
179	2022	Construction (AS)	-	10/31/2015	10/31/2021	2,800	2,800	1.942%	1.942%				2,800		
180	2022	Conservation	-	12/31/2013	12/31/2021	6,000	6,000	3.142%	3.142%				6,000		
181	2022	Construction (AS)	-	2/29/2016	2/28/2022	3,000	3,000	0.697%	0.697%				3,000		
182	2022	Technology (G)	-	10/31/2015	7/31/2022	6,000	6,000	0.674%	0.674%				6,000		
183	2022	Conservation	-	8/31/2015	8/31/2022	6,000	6,000	2.233%	2.233%				6,000		
184	2022	Bureau Direct	-	11/20/2013	9/30/2022	19,000	19,000	3.125%	3.125%				19,000		
185	2022	Fish and Wildlife	-	11/20/2013	9/30/2022	31,000	31,000	3.125%	3.125%				31,000		
186	2022	Conservation	-	9/30/2015	9/30/2022	4,000	4,000	2.062%	2.062%				4,000		
187	2022	Technology (G)	-	9/30/2017	9/30/2022	8,000	8,000	1.400%	1.400%				8,000		
188	2022	Columbia Basin	Bureau of Reclamation	9/30/2010	9/30/2051	69,226	46,306	5.875%	5.875%				37,701		
189		FY 2022 Subtotal:	-	-	-	155,026	132,106						123,501		
190	2023	Conservation	-	1/31/2011	1/31/2023	40,000	40,000	4.046%	4.046%				40,000		
191	2023	Conservation	-	4/30/2011	4/30/2023	35,000	35,000	3.932%	3.932%				35,000		
192	2023	Conservation	-	8/12/2011	8/31/2023	40,000	40,000	3.206%	3.206%				40,000		
193	2023	Conservation	-	11/20/2013	9/30/2023	27,000	27,000	3.375%	3.375%				27,000		
194	2023	Technology (G)	-	9/30/2018	9/30/2023	5,000	5,000	2.440%	2.440%				5,000		
195	2023	Construction (AS)	-	9/30/2017	9/30/2023	3,150	3,150	1.510%	1.510%				3,150		
196		FY 2023 Subtotal:	-	-	-	150,150	150,150						150,150		
197	2024	Conservation	-	12/31/2013	12/31/2023	55,000	55,000	0.732%	0.732%				55,000		
198	2024	Conservation	-	12/31/2014	12/31/2023	7,000	7,000	2.403%	2.403%				7,000		
199	2024	Conservation	-	1/31/2015	1/31/2024	7,000	7,000	1.908%	1.908%				7,000		
200	2024	Fish and Wildlife	-	1/31/2015	1/31/2024	5,000	5,000	1.908%	1.908%				5,000		
201	2024	Conservation	-	2/28/2015	2/29/2024	8,000	8,000	2.251%	2.251%				8,000		
202	2024	Technology (G)	-	9/30/2019	3/31/2024	5,000	5,000	3.160%	3.160%				5,000		
203	2024	Conservation	-	4/30/2015	4/30/2024	5,000	5,000	2.269%	2.269%				5,000		
204	2024	Conservation	-	5/31/2014	4/30/2024	15,000	15,000	0.526%	0.526%				15,000		
205	2024	Fish and Wildlife	-	6/30/2009	6/30/2024	20,000	20,000	4.556%	4.556%				20,000		
206	2024	Construction (AS)	-	9/30/2018	9/30/2024	5,670	5,600	2.560%	2.560%				5,600		
207	2024	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	8,605	5.875%	5.875%				4,879		
208		FY 2024 Subtotal:	-	-	-	201,896	141,205						137,479		
209	2025	Conservation	-	6/30/2014	10/31/2024	5,000	5,000	0.526%	0.526%				5,000		
210	2025	Conservation	-	10/31/2014	12/31/2024	10,000	10,000	0.732%	0.732%				10,000		
211	2025	Conservation	-	3/31/2015	3/31/2025	5,000	5,000	2.295%	2.295%				5,000		
212	2025	Conservation	-	5/31/2014	4/30/2025	3,000	3,000	0.526%	0.526%				3,000		
213	2025	Conservation	-	4/30/2014	6/30/2025	30,000	30,000	0.732%	0.732%				30,000		
214	2025	Conservation	-	7/31/2014	7/31/2025	12,000	12,000	0.674%	0.674%				12,000		
215	2025	Conservation	-	8/31/2014	9/30/2025	4,000	4,000	0.947%	0.947%				4,000		
216	2025	Construction (AS)	-	9/30/2019	9/30/2025	5,670	5,950	3.270%	3.270%				5,950		
217	2025	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	5,516	5.375%	5.375%				3,620		
218	2025	John Day	Corps of Engineers	9/30/1999	9/30/2049	3,510	3,510	5.375%	5.375%				3,510		
219	2025	Lower Granite	Corps of Engineers	9/30/1999	9/30/2049	856	856	5.375%	5.375%				856		
220	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1999	9/30/2049	7	7	5.375%	5.375%				7		
221	2025	Bonneville Dam	Corps of Engineers	9/30/2001	9/30/2051	2,530	2,530	5.875%	5.875%				2,530		
222	2025	Chief Joseph	Corps of Engineers	9/30/2001	9/30/2051	345	345	5.875%	5.875%				345		
223	2025	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	3,727	5.875%	5.875%				3,727		
224	2025	Bonneville Dam	Corps of Engineers	9/30/2002	9/30/2052	448	448	5.500%	5.500%				448		
225	2025	Chief Joseph	Corps of Engineers	9/30/2002	9/30/2052	2	2	5.500%	5.500%				2		
226	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/2002	9/30/2052	8,797	8,797	5.500%	5.500%				8,797		
227	2025	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2002	9/30/2052	18	18	5.500%	5.500%				18		
228	2025	Dworshak	Corps of Engineers	9/30/2002	9/30/2052	199	199	5.500%	5.500%				199		
229	2025	Hills Creek	Corps of Engineers	9/30/2002	9/30/2052	2	2	5.500%	5.500%				2		
230	2025	Ice Harbor	Corps of Engineers	9/30/2002	9/30/2052	1,014	1,014	5.500%	5.500%				1,014		

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
231	2025	Little Goose	Corps of Engineers	9/30/2002	9/30/2052	27	27	5.500%	5.500%				27		
232	2025	Lower Granite	Corps of Engineers	9/30/2002	9/30/2052	1,275	1,275	5.500%	5.500%				1,275		
233	2025	Lower Monument	Corps of Engineers	9/30/2002	9/30/2052	29	29	5.500%	5.500%				29		
234	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2002	9/30/2052	890	890	5.500%	5.500%				890		
235	2025	The Dalles	Corps of Engineers	9/30/2002	9/30/2052	1,226	1,226	5.500%	5.500%				1,226		
236		FY 2025 Subtotal:	-	-	170,585	105,366							103,470		
237	2026	Conservation	-	10/31/2013	10/31/2025	34,000	34,000	3.568%	3.568%				34,000		
238	2026	Conservation	-	1/31/2014	1/31/2026	5,000	5,000	3.621%	3.621%				5,000		
239	2026	Fish and Wildlife	-	1/31/2011	1/31/2026	50,000	50,000	4.440%	4.440%				50,000		
240	2026	Fish and Wildlife	-	2/28/2011	2/28/2026	15,000	15,000	4.398%	4.398%				15,000		
241	2026	Fish and Wildlife	-	6/22/2011	6/30/2026	15,000	15,000	4.205%	4.205%				15,000		
242	2026	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	1,896	5.375%	5.375%				990		
243		FY 2026 Subtotal:	-	-	124,516	120,896							119,990		
244	2027	Fish and Wildlife	-	10/31/2013	12/31/2026	28,000	28,000	3.717%	3.717%				28,000		
245	2027	Conservation	-	11/30/2014	3/31/2027	6,000	6,000	0.947%	0.947%				6,000		
246	2027	Fish and Wildlife	-	5/31/2014	4/30/2027	11,000	11,000	0.526%	0.526%				11,000		
247	2027	Fish and Wildlife	-	11/30/2013	5/31/2027	5,000	5,000	0.713%	0.713%				5,000		
248	2027	Fish and Wildlife	-	10/31/2013	5/31/2027	11,000	11,000	3.762%	3.762%				11,000		
249	2027	Bonneville Dam	Corps of Engineers	9/30/1999	9/30/2049	19,368	19,368	5.375%	5.375%				19,368		
250	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/1999	9/30/2049	14,115	14,115	5.375%	5.375%				14,115		
251	2027	Dworshak	Corps of Engineers	9/30/1999	9/30/2049	630	630	5.375%	5.375%				630		
252	2027	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	906	5.375%	5.375%				906		
253	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	60,581	5.375%	5.375%				6,627		
254	2027	Ice Harbor	Corps of Engineers	9/30/2004	9/30/2054	3,321	3,321	5.375%	5.375%				3,321		
255	2027	John Day	Corps of Engineers	9/30/2004	9/30/2054	2,830	2,830	5.375%	5.375%				2,830		
256	2027	Little Goose	Corps of Engineers	9/30/2004	9/30/2054	68	67	5.375%	5.375%				67		
257	2027	Lower Monument	Corps of Engineers	9/30/2004	9/30/2054	3,423	3,423	5.375%	5.375%				3,423		
258	2027	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2004	9/30/2054	230	230	5.375%	5.375%				230		
259	2027	McNary	Corps of Engineers	9/30/2004	9/30/2054	6,138	6,138	5.375%	5.375%				6,138		
260	2027	The Dalles	Corps of Engineers	9/30/2004	9/30/2054	182	182	5.375%	5.375%				182		
261		FY 2027 Subtotal:	-	-	177,399	172,789							118,835		
262	2028	Bureau Direct	-	4/30/2009	4/30/2023	25,000	25,000	4.391%	3.642%	Global	45046	46873	3.642	25,000	
263	2028	Fish and Wildlife	-	11/20/2013	9/30/2023	23,000	23,000	3.375%	3.642%	Global	45199	47026	3.642	23,000	
264	2028	Conservation	-	10/31/2015	10/31/2027	25,000	25,000	0.732%	0.732%				25,000		
265	2028	Fish and Wildlife	-	3/31/2015	3/31/2028	3,000	3,000	2.511%	2.511%				3,000		
266	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	53,953	5.375%	5.375%				4,624		
267		FY 2028 Subtotal:	-	-	136,581	129,953							80,624		
268	2029	Bureau Direct	-	1/16/2014	12/31/2018	26,000	26,000	1.943%	3.705%	Global	43465	47483	3.705	26,000	
269	2029	Bureau Direct	-	1/16/2014	12/31/2018	21,000	21,000	1.943%	3.705%	Global	43465	47483	3.705	21,000	
270	2029	Bureau Direct	-	1/16/2014	12/31/2018	14,000	14,000	1.943%	3.705%	Global	43465	47483	3.705	14,000	
271	2029	Bureau Direct	-	1/31/2010	1/31/2019	10,000	10,000	3.714%	3.705%	Global	43496	47149	3.705	10,000	
272	2029	Bureau Direct	-	9/30/2009	9/30/2019	25,000	25,000	3.699%	3.705%	Global	43738	47391	3.705	25,000	
273	2029	Fish and Wildlife	-	10/31/2013	10/31/2028	22,000	22,000	3.880%	3.880%				22,000		
274	2029	Fish and Wildlife	-	1/31/2014	1/31/2029	7,000	7,000	3.896%	3.896%				7,000		
275	2029	Fish and Wildlife	-	10/31/2014	1/31/2029	15,000	15,000	0.674%	0.674%				15,000		
276	2029	Fish and Wildlife	-	4/30/2014	2/28/2029	7,000	7,000	0.697%	0.697%				7,000		
277	2029	Fish and Wildlife	-	8/31/2014	7/31/2029	5,000	5,000	0.674%	0.674%				5,000		
278	2029	Bureau Direct	-	6/30/2009	6/30/2039	25,000	25,000	5.192%	5.192%				25,000	2308.004	
279	2029	Bonneville Dam	Corps of Engineers	9/30/2003	9/30/2053	4,581	4,581	5.125%	5.125%				4,581		
280	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2003	9/30/2053	68,440	68,440	5.125%	5.125%				68,440		
281	2029	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2003	9/30/2053	223	223	5.125%	5.125%				223		
282	2029	Dworshak	Corps of Engineers	9/30/2003	9/30/2053	761	761	5.125%	5.125%				761		
283	2029	Ice Harbor	Corps of Engineers	9/30/2003	9/30/2053	50	50	5.125%	5.125%				50		
284	2029	Little Goose	Corps of Engineers	9/30/2003	9/30/2053	146	146	5.125%	5.125%				146		
285	2029	Lookout Dam	Corps of Engineers	9/30/2003	9/30/2053	135	135	5.125%	5.125%				135		
286	2029	Lower Granite	Corps of Engineers	9/30/2003	9/30/2053	42	42	5.125%	5.125%				42		
287	2029	Lower Monument	Corps of Engineers	9/30/2003	9/30/2053	22	22	5.125%	5.125%				22		
288	2029	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2003	9/30/2053	98	98	5.125%	5.125%				98		
289	2029	McNary	Corps of Engineers	9/30/2003	9/30/2053	97	97	5.125%	5.125%				97		

TABLE 13D
Application of Amortization, SHIFT STUDY
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
290	2029	Chief Joseph	Corps of Engineers	9/30/2003	9/30/2053	992	992	5.125%	5.125%				992		
291	2029	Bonneville Dam	Corps of Engineers	9/30/2004	9/30/2054	26,741	26,741	5.375%	5.375%				26,741		
292	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	49,329	5.375%	5.375%				49,329		
293	2029	Cougar	Corps of Engineers	9/30/2004	9/30/2054	3,622	3,622	5.375%	5.375%				3,622		
294	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2005	9/30/2055	52,039	52,039	5.125%	5.125%				52,039		
295	2029	Hills Creek	Corps of Engineers	9/30/2005	9/30/2055	46	46	5.125%	5.125%				46		
296	2029	Hungry Horse Dam	Bureau of Reclamation	9/30/2005	9/30/2055	2,951	2,951	5.125%	5.125%				2,951		
297	2029	John Day	Corps of Engineers	9/30/2005	9/30/2055	2,828	2,827	5.125%	5.125%				2,827		
298	2029	Lookout Dam	Corps of Engineers	9/30/2005	9/30/2055	7,355	7,355	5.125%	5.125%				7,355		
299	2029	Lower Granite	Corps of Engineers	9/30/2005	9/30/2055	393	393	5.125%	5.125%				393		
300	2029	Lower Monument	Corps of Engineers	9/30/2005	9/30/2055	527	527	5.125%	5.125%				527		
301	2029	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2005	9/30/2055	4	4	5.125%	5.125%				4		
302	2029	McNary	Corps of Engineers	9/30/2005	9/30/2055	550	550	5.125%	5.125%				550		
303	2029	The Dalles	Corps of Engineers	9/30/2005	9/30/2055	36,019	36,019	5.125%	5.125%				36,019		
304	2029	Yakima Chandler/Kenniwick	Bureau of Reclamation	9/30/2005	9/30/2055	833	833	5.125%	5.125%				833		
305		FY 2029 Subtotal:	-	-	-	447,073	435,822						409,474	2308.004	
306	2030	Bureau Direct	-	6/30/2010	6/30/2020	10,000	10,000	3.243%	4.057%	Global	44012	47664	4.057	10,000	
307	2030	Bureau Direct	-	6/30/2010	6/30/2020	30,000	30,000	3.243%	4.057%	Global	44012	47664	4.057	30,000	
308	2030	Bureau Direct	-	11/20/2013	9/30/2020	51,000	51,000	2.473%	4.057%	Global	44104	47756	4.057	51,000	
309	2030	Fish and Wildlife	-	11/30/2014	3/31/2030	8,000	8,000	0.947%	0.947%					8,000	
310	2030	Corps	-	5/31/2016	5/31/2030	15,000	15,000	2.599%	2.599%					15,000	
311	2030	Bureau Direct	-	7/31/2016	7/31/2030	12,000	12,000	2.145%	2.145%					12,000	
312	2030	Bureau Direct	-	7/31/2016	7/31/2030	25,000	25,000	2.145%	2.145%					25,000	
313	2030	Bureau Direct	-	1/31/2011	1/31/2039	35,000	35,000	5.040%	5.040%					35,000	2705.474
314	2030	Bureau Direct	-	2/28/2011	2/28/2040	50,000	50,000	4.995%	4.995%					25,484	1820.641
315	2030	Albeni Falls	Corps of Engineers	9/30/2005	9/30/2055	481	481	5.125%	5.125%				481		
316	2030	Boise	Bureau of Reclamation	9/30/2005	9/30/2055	903	903	5.125%	5.125%				903		
317	2030	Bonneville Dam	Corps of Engineers	9/30/2005	9/30/2055	19,725	19,725	5.125%	5.125%				19,725		
318	2030	Columbia Basin	Bureau of Reclamation	9/30/2005	9/30/2055	10,963	10,963	5.125%	5.125%				10,963		
319	2030	Columbia River Fish Mitigation	Corps of Engineers	9/30/2005	9/30/2055	52,039	26,348	5.125%	5.125%				26,348		
320	2030	Cougar	Corps of Engineers	9/30/2005	9/30/2055	8,130	8,130	5.125%	5.125%				8,130		
321	2030	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2005	9/30/2055	1,031	1,031	5.125%	5.125%				1,031		
322	2030	Dworshak	Corps of Engineers	9/30/2005	9/30/2055	713	713	5.125%	5.125%				713		
323	2030	Boise	Bureau of Reclamation	9/30/2007	9/30/2057	76	76	5.000%	5.000%				76		
324	2030	Bonneville Dam	Corps of Engineers	9/30/2007	9/30/2057	1,124	1,124	5.000%	5.000%				1,124		
325	2030	Columbia Basin	Bureau of Reclamation	9/30/2007	9/30/2057	929	929	5.000%	5.000%				929		
326	2030	Columbia River Fish Mitigation	Corps of Engineers	9/30/2007	9/30/2057	53,525	53,525	5.000%	5.000%				53,525		
327	2030	Cougar	Corps of Engineers	9/30/2007	9/30/2057	120	120	5.000%	5.000%				120		
328	2030	Hungry Horse Dam	Bureau of Reclamation	9/30/2007	9/30/2057	294	294	5.000%	5.000%				294		
329	2030	John Day	Corps of Engineers	9/30/2007	9/30/2057	233	233	5.000%	5.000%				233		
330	2030	Lookout Dam	Corps of Engineers	9/30/2007	9/30/2057	572	572	5.000%	5.000%				572		
331	2030	The Dalles	Corps of Engineers	9/30/2007	9/30/2057	140	140	5.000%	5.000%				140		
332		FY 2030 Subtotal:	-	-	-	386,997	361,306						336,790	4526.115	
333	2031	Fish and Wildlife	-	2/29/2016	2/28/2031	4,000	4,000	0.697%	0.697%				4,000		
334	2031	Fish and Wildlife	-	10/31/2015	2/28/2031	4,000	4,000	0.697%	0.697%				4,000		
335	2031	Fish and Wildlife	-	10/31/2015	3/31/2031	5,000	5,000	0.947%	0.947%				5,000		
336	2031	Corps	-	4/30/2016	4/30/2031	53,000	53,000	2.661%	2.661%				53,000		
337	2031	Bureau Direct	-	4/30/2016	4/30/2031	17,000	17,000	2.661%	2.661%				17,000		
338	2031	Bureau Direct	-	6/22/2011	6/30/2036	30,000	30,000	4.629%	4.629%				30,000	1470.333	
339	2031	Bureau Direct	-	6/22/2011	6/30/2038	30,000	30,000	4.700%	4.700%				30,000	1698.58	
340	2031	Bureau Direct	-	2/28/2011	2/28/2040	50,000	24,516	4.995%	4.995%				24,516	1785.863	
341	2031	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	366,395	4.500%	4.500%				366,395		
342	2031	John Day	Corps of Engineers	9/30/2006	9/30/2056	601	601	4.500%	4.500%				601		
343	2031	Lower Monument	Corps of Engineers	9/30/2006	9/30/2056	285	285	4.500%	4.500%				285		
344	2031	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2006	9/30/2056	379	379	4.500%	4.500%				379		
345	2031	The Dalles	Corps of Engineers	9/30/2006	9/30/2056	2,030	2,030	4.500%	4.500%				2,030		
346	2031	McNary	Corps of Engineers	9/30/2006	9/30/2056	4,080	4,080	4.500%	4.500%				4,080		
347		FY 2031 Subtotal:	-	-	-	566,769	541,285						365,945	4954.776	
348	2032	Bureau Direct	-	9/30/2014	5/31/2032	16,000	16,000	0.713%	0.713%				16,000		

TABLE 13D
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
349	2032	Bureau Direct	-	9/30/2014	5/31/2032	10,000	10,000	0.713%	0.713%				10,000		
350	2032	Bureau Direct	-	7/31/2017	7/31/2032	13,000	13,000	2.180%	2.180%				13,000		
351	2032	Corps	-	7/31/2017	7/31/2032	54,000	26,796	2.180%	2.180%				26,796		
352	2032	Bureau Direct	-	8/31/2017	8/31/2032	13,000	13,000	2.180%	2.180%				13,000		
353	2032	Corps	-	8/31/2017	8/31/2032	54,000	26,796	2.180%	2.180%				26,796		
354	2032	Bureau Direct	-	9/30/2017	9/30/2032	14,000	14,000	2.180%	2.180%				14,000		
355	2032	Corps	-	9/30/2017	9/30/2032	55,000	27,796	2.180%	2.180%				27,796		
356	2032	Fish and Wildlife	-	9/30/2017	9/30/2032	40,000	40,000	2.180%	2.180%				40,000		
357	2032	Boise	Bureau of Reclamation	9/30/2006	9/30/2056	15	15	4.500%	4.500%				15		
358	2032	Bonneville Dam	Corps of Engineers	9/30/2006	9/30/2056	2,628	2,628	4.500%	4.500%				2,628		
359	2032	Columbia Basin	Bureau of Reclamation	9/30/2006	9/30/2056	1,987	1,987	4.500%	4.500%				1,987		
360	2032	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	175,340	4.500%	4.500%				175,340		
361	2032	Cougar	Corps of Engineers	9/30/2006	9/30/2056	109	109	4.500%	4.500%				109		
362	2032	Dworshak	Corps of Engineers	9/30/2006	9/30/2056	73	73	4.500%	4.500%				73		
363	2032	Boise	Bureau of Reclamation	9/30/2009	9/30/2059	2	2	4.375%	4.375%				2		
364	2032	Columbia River Fish Mitigation	Corps of Engineers	9/30/2009	9/30/2059	103,203	103,203	4.375%	4.375%				103,203		
365	2032	Cougar	Corps of Engineers	9/30/2009	9/30/2059	121	121	4.375%	4.375%				121		
366	2032	Dworshak	Corps of Engineers	9/30/2009	9/30/2059	2,307	2,307	4.375%	4.375%				2,307		
367	2032	Ice Harbor	Corps of Engineers	9/30/2009	9/30/2059	2,615	2,615	4.375%	4.375%				2,615		
368	2032	Little Goose	Corps of Engineers	9/30/2009	9/30/2059	3,171	3,171	4.375%	4.375%				3,171		
369	2032	Lower Granite	Corps of Engineers	9/30/2009	9/30/2059	5,669	5,669	4.375%	4.375%				5,669		
370	2032	Lower Monument	Corps of Engineers	9/30/2009	9/30/2059	2,332	2,332	4.375%	4.375%				2,332		
371	2032	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2009	9/30/2059	1,540	1,540	4.375%	4.375%				1,534		
372		FY 2032 Subtotal:	-	-	-	761,167	488,501						488,496		
373	2033	Bureau Direct	-	9/30/2014	6/30/2033	11,000	11,000	0.732%	0.732%				11,000		
374	2033	Bureau Direct	-	9/30/2014	6/30/2033	12,000	12,000	0.732%	0.732%				12,000		
375	2033	Bureau Direct	-	9/30/2014	7/31/2033	15,000	15,000	0.674%	0.674%				15,000		
376	2033	Bureau Direct	-	7/31/2018	7/31/2033	28,000	28,000	3.250%	3.250%				28,000		
377	2033	Corps	-	7/31/2018	7/31/2033	53,000	53,000	3.250%	3.250%				53,000		
378	2033	Bureau Direct	-	9/30/2015	9/30/2033	10,000	10,000	3.134%	3.134%				10,000		
379	2033	Corps	-	9/30/2015	9/30/2033	4,000	4,000	3.134%	3.134%				4,000		
380	2033	Fish and Wildlife	-	9/30/2018	9/30/2033	51,000	51,000	3.250%	3.250%				51,000		
381	2033	Bureau Direct	-	10/31/2010	10/31/2034	20,000	20,000	4.211%	4.211%				20,000	265	
382	2033	Corps	-	7/31/2019	7/31/2036	40,000	40,000	3.960%	3.960%				2,591		
383	2033	Bureau Direct	-	8/12/2011	8/31/2037	30,000	30,000	4.208%	4.208%				30,000	833	
384	2033	Bureau Direct	-	8/31/2019	8/31/2037	48,000	48,000	3.990%	3.990%				48,000		
385	2033	Corps	-	8/31/2019	8/31/2037	41,000	41,000	3.990%	3.990%				41,000		
386	2033	Bureau Direct	-	9/30/2019	9/30/2038	48,000	48,000	4.030%	4.030%				48,000		
387	2033	Corps	-	9/30/2019	9/30/2038	41,000	41,000	4.030%	4.030%				41,000		
388	2033	Bonneville Dam	Corps of Engineers	9/30/2009	9/30/2059	2,744	2,744	4.375%	4.375%				2,744		
389	2033	Chief Joseph	Corps of Engineers	9/30/2009	9/30/2059	24,727	24,727	4.375%	4.375%				24,727		
390	2033	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2009	9/30/2059	1,540	5	4.375%	4.375%				5		
391	2033	Little Goose	Corps of Engineers	9/30/2010	9/30/2060	30	30	4.250%	4.250%				30		
392	2033	Lower Granite	Corps of Engineers	9/30/2010	9/30/2060	1,156	1,156	4.250%	4.250%				1,156		
393	2033	Albeni Falls	Corps of Engineers	9/30/2010	9/30/2060	42	42	4.250%	4.250%				42		
394	2033	Bonneville Dam	Corps of Engineers	9/30/2010	9/30/2060	1,425	1,425	4.250%	4.250%				1,425		
395	2033	Columbia Basin	Bureau of Reclamation	9/30/2010	9/30/2060	877	877	4.250%	4.250%				877		
396	2033	Columbia River Fish Mitigation	Corps of Engineers	9/30/2010	9/30/2060	56,832	56,832	4.250%	4.250%				56,832		
397	2033	Cougar	Corps of Engineers	9/30/2010	9/30/2060	59	59	4.250%	4.250%				59		
398	2033	Hungry Horse Dam	Bureau of Reclamation	9/30/2010	9/30/2060	779	779	4.250%	4.250%				779		
399	2033	Ice Harbor	Corps of Engineers	9/30/2010	9/30/2060	207	207	4.250%	4.250%				207		
400	2033	John Day	Corps of Engineers	9/30/2010	9/30/2060	356	356	4.250%	4.250%				356		
401	2033	Libby	Corps of Engineers	9/30/2010	9/30/2060	40	40	4.250%	4.250%				40		
402	2033	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2010	9/30/2060	6	6	4.250%	4.250%				6		
403		FY 2033 Subtotal:	-	-	-	542,819	541,285						503,876	1,098	
404	2034	Bureau Direct	-	2/27/2012	2/28/2034	55,000	55,000	0.697%	0.697%				55,000		
405	2034	Bureau Direct	-	8/31/2018	8/31/2034	28,000	28,000	3.290%	3.290%				28,000		
406	2034	Corps	-	8/31/2018	8/31/2034	53,000	53,000	3.290%	3.290%				53,000		
407	2034	Fish and Wildlife	-	9/30/2019	9/30/2034	44,000	44,000	3.890%	3.890%				44,000		

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
408	2034	Bureau Direct	-	7/31/2019	7/31/2036	47,000	47,000	3.960%	3.960%				47,000		
409	2034	Corps	-	7/31/2019	7/31/2036	40,000	37,409	3.960%	3.960%				37,409		
410	2034	Hungry Horse Dam	Bureau of Reclamation	9/30/2011	9/30/2061	503	503	3.750%	3.750%				503		
411	2034	Columbia Basin	Bureau of Reclamation	9/30/2011	9/30/2061	1,723	1,723	3.750%	3.750%				1,723		
412	2034	Columbia River Fish Mitigation	Corps of Engineers	9/30/2011	9/30/2061	106,014	106,014	3.750%	3.750%				62,219		
413	2034	Green Peter/Foster	Corps of Engineers	9/30/2011	9/30/2061	87	87	3.750%	3.750%				87		
414	2034	Hills Creek	Corps of Engineers	9/30/2011	9/30/2061	12	12	3.750%	3.750%				12		
415	2034	Ice Harbor	Corps of Engineers	9/30/2011	9/30/2061	819	819	3.750%	3.750%				819		
416	2034	John Day	Corps of Engineers	9/30/2011	9/30/2061	175	175	3.750%	3.750%				175		
417	2034	Libby	Corps of Engineers	9/30/2011	9/30/2061	152	152	3.750%	3.750%				152		
418	2034	Lookout Dam	Corps of Engineers	9/30/2011	9/30/2061	17	17	3.750%	3.750%				17		
419	2034	Lost Creek	Corps of Engineers	9/30/2011	9/30/2061	7	7	3.750%	3.750%				7		
420	2034	Lower Granite	Corps of Engineers	9/30/2011	9/30/2061	8	8	3.750%	3.750%				8		
421	2034	McNary	Corps of Engineers	9/30/2011	9/30/2061	565	565	3.750%	3.750%				565		
422	2034	Columbia Basin	Bureau of Reclamation	9/30/2014	9/30/2064	18	18	3.875%	3.875%				18		
423	2034	Cougar	Corps of Engineers	9/30/2014	9/30/2064	12	12	3.875%	3.875%				12		
424	2034	Hungry Horse Dam	Bureau of Reclamation	9/30/2014	9/30/2064	12	12	3.875%	3.875%				12		
425	2034	Bonneville Dam	Corps of Engineers	9/30/2014	9/30/2064			3.875%	3.875%						
426	2034	Columbia River Fish Mitigation	Corps of Engineers	9/30/2014	9/30/2064	110,071	110,071	3.875%	3.875%				110,071		
427	2034	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2014	9/30/2064	18	18	3.875%	3.875%				18		
428	2034	Green Peter/Foster	Corps of Engineers	9/30/2014	9/30/2064	385	385	3.875%	3.875%				385		
429	2034	Lower Granite	Corps of Engineers	9/30/2014	9/30/2064	2,644	2,644	3.875%	3.875%				2,644		
430	2034	Lower Monument	Corps of Engineers	9/30/2014	9/30/2064	1,430	1,430	3.875%	3.875%				1,430		
431	2034	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2014	9/30/2064	222	222	3.875%	3.875%				222		
432	2034	McNary	Corps of Engineers	9/30/2014	9/30/2064	759	759	3.875%	3.875%				759		
433	2034	Columbia River Fish Mitigation	Corps of Engineers	9/30/2019	9/30/2069	63,746	63,746	3.870%	3.870%				63,746		
434		FY 2034 Subtotal:	-	-	-	556,399	553,807						510,012		
435	2035	Bureau Direct	-	9/30/2018	9/30/2035	29,000	29,000	3.330%	3.330%				29,000		
436	2035	Corps	-	9/30/2018	9/30/2035	53,000	53,000	3.330%	3.330%				53,000		
437	2035	Bonneville Dam	Corps of Engineers	9/30/2011	9/30/2061	10,962	10,962	3.750%	3.750%				10,962		
438	2035	Chief Joseph	Corps of Engineers	9/30/2011	9/30/2061	4	4	3.750%	3.750%				4		
439	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2011	9/30/2061	106,014	43,795	3.750%	3.750%				43,795		
440	2035	Cougar	Corps of Engineers	9/30/2011	9/30/2061	282	282	3.750%	3.750%				282		
441	2035	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2011	9/30/2061	122	122	3.750%	3.750%				122		
442	2035	Cougar	Corps of Engineers	9/30/2012	9/30/2062	139	139	3.375%	3.375%				139		
443	2035	Hungry Horse Dam	Bureau of Reclamation	9/30/2012	9/30/2062	3	3	3.375%	3.375%				3		
444	2035	Minidoka/Palisades	Bureau of Reclamation	9/30/2012	9/30/2062	7	7	3.375%	3.375%				7		
445	2035	Green Peter/Foster	Corps of Engineers	9/30/2012	9/30/2062	28	28	3.375%	3.375%				28		
446	2035	Chief Joseph	Corps of Engineers	9/30/2012	9/30/2062	28	28	3.375%	3.375%				28		
447	2035	Columbia Basin	Bureau of Reclamation	9/30/2012	9/30/2062	11	11	3.375%	3.375%				11		
448	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2012	9/30/2062	101,616	101,616	3.375%	3.375%				101,616		
449	2035	Hills Creek	Corps of Engineers	9/30/2012	9/30/2062	142	142	3.375%	3.375%				142		
450	2035	Ice Harbor	Corps of Engineers	9/30/2012	9/30/2062	115	115	3.375%	3.375%				115		
451	2035	John Day	Corps of Engineers	9/30/2012	9/30/2062	6,161	6,161	3.375%	3.375%				6,161		
452	2035	Libby	Corps of Engineers	9/30/2012	9/30/2062	16	16	3.375%	3.375%				16		
453	2035	Lookout Dam	Corps of Engineers	9/30/2012	9/30/2062	294	294	3.375%	3.375%				294		
454	2035	Lower Monument	Corps of Engineers	9/30/2012	9/30/2062	89	89	3.375%	3.375%				89		
455	2035	McNary	Corps of Engineers	9/30/2012	9/30/2062	12	11	3.375%	3.375%				11		
456	2035	RRP - Green Springs	Bureau of Reclamation	9/30/2012	9/30/2062	2	2	3.375%	3.375%				2		
457	2035	Columbia Basin	Bureau of Reclamation	9/30/2013	9/30/2063	3,083	3,083	2.875%	2.875%				911		
458	2035	RRP - Green Springs	Bureau of Reclamation	9/30/2013	9/30/2063	1	1	2.875%	2.875%				1		
459	2035	Bonneville Dam	Corps of Engineers	9/30/2015	9/30/2065	102	102	3.250%	3.250%				102		
460	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2015	9/30/2065	64,291	64,291	3.250%	3.250%				64,291		
461	2035	Green Peter/Foster	Corps of Engineers	9/30/2015	9/30/2065	68	68	3.250%	3.250%				68		
462	2035	Hungry Horse Dam	Bureau of Reclamation	9/30/2015	9/30/2065			3.250%	3.250%						
463	2035	Ice Harbor	Corps of Engineers	9/30/2015	9/30/2065	3,175	3,175	3.250%	3.250%				3,175		
464	2035	John Day	Corps of Engineers	9/30/2015	9/30/2065	163	163	3.250%	3.250%				163		
465	2035	Lower Granite	Corps of Engineers	9/30/2015	9/30/2065	1,597	1,597	3.250%	3.250%				1,597		
466	2035	Minidoka/Palisades	Bureau of Reclamation	9/30/2015	9/30/2065	19,237	19,237	3.250%	3.250%				19,237		

TABLE 13D
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
467	2035	The Dalles	Corps of Engineers	9/30/2015	9/30/2065	302	302	3.250%		3.250%			302		
468	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2016	9/30/2066	30,190	30,190	3.000%		3.000%			30,190		
469	2035	Cougar	Corps of Engineers	9/30/2016	9/30/2066	2	2	3.000%		3.000%			2		
470	2035	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2016	9/30/2066	31	31	3.000%		3.000%			31		
471	2035	Green Peter/Foster	Corps of Engineers	9/30/2016	9/30/2066	70	70	3.000%		3.000%			70		
472	2035	Ice Harbor	Corps of Engineers	9/30/2016	9/30/2066	558	558	3.000%		3.000%			558		
473	2035	Lower Granite	Corps of Engineers	9/30/2016	9/30/2066	1,878	1,878	3.000%		3.000%			1,878		
474	2035	Lower Monument	Corps of Engineers	9/30/2016	9/30/2066	155	155	3.000%		3.000%			155		
475	2035	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2016	9/30/2066	1,256	1,256	3.000%		3.000%			1,256		
476	2035	Minidoka/Palissades	Bureau of Reclamation	9/30/2016	9/30/2066	206	206	3.000%		3.000%			206		
477	2035	The Dalles	Corps of Engineers	9/30/2016	9/30/2066	4	4	3.000%		3.000%			4		
478	2035	Columbia River Fish Mitigation	Corps of Engineers	9/30/2018	9/30/2068	147,186	147,186	3.320%		3.320%			147,186		
479		FY 2035 Subtotal:	-	-	-	581,598	519,379						147,186	517,208	
480	2036	Bureau Direct	-	6/30/2013	1/31/2039	35,000	35,000	0.674%		0.674%			32,479		2,521
481	2036	Corps	-	2/29/2016	2/28/2045	3,000	3,000	0.697%		0.697%			2,396		604
482	2036	Bonneville Dam	Corps of Engineers	9/30/2013	9/30/2063	268	268	2.875%		2.875%			268		
483	2036	Chief Joseph	Corps of Engineers	9/30/2013	9/30/2063	10	10	2.875%		2.875%			10		
484	2036	Columbia Basin	Bureau of Reclamation	9/30/2013	9/30/2063	3,083	2,171	2.875%		2.875%			2,171		
485	2036	Columbia River Fish Mitigation	Corps of Engineers	9/30/2013	9/30/2063	95,274	95,274	2.875%		2.875%			95,274		
486	2036	Cougar	Corps of Engineers	9/30/2013	9/30/2063	4,088	4,088	2.875%		2.875%			4,088		
487	2036	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2013	9/30/2063	528	528	2.875%		2.875%			528		
488	2036	John Day	Corps of Engineers	9/30/2013	9/30/2063	17	17	2.875%		2.875%			17		
489	2036	Little Goose	Corps of Engineers	9/30/2013	9/30/2063	66	66	2.875%		2.875%			66		
490	2036	McNary	Corps of Engineers	9/30/2013	9/30/2063	1,000	1,000	2.875%		2.875%			1,000		
491	2036	Replacements	-	3/31/2020	3/31/2065	218,435	218,435	4.430%		4.430%			218,435		
492	2036	Replacements	-	3/31/2021	3/31/2066	218,435	218,435	4.430%		4.430%			120,316		
493	2036	Columbia River Fish Mitigation	Corps of Engineers	9/30/2017	9/30/2067	63,629	63,629	2.380%		2.380%			63,629		
494		FY 2036 Subtotal:	-	-	-	642,834	641,923						540,678		3,125
495	2037	Replacements	-	3/31/2021	3/31/2066	218,435	98,120	4.430%		4.430%			98,120		
496	2037	Replacements	-	3/31/2022	3/31/2067	218,435	218,435	4.430%		4.430%			218,435		
497	2037	Replacements	-	3/31/2023	3/31/2068	218,435	218,435	4.430%		4.430%			218,435		
498	2037	Replacements	-	3/31/2024	3/31/2069	218,435	218,435	4.430%		4.430%			34,501		
499		FY 2037 Subtotal:	-	-	-	873,742	753,426						569,491		
500	2038	Replacements	-	3/31/2024	3/31/2069	218,435	183,935	4.430%		4.430%			183,935		
501	2038	Replacements	-	3/31/2025	3/31/2070	218,435	218,435	4.430%		4.430%			218,435		
502	2038	Replacements	-	3/31/2026	3/31/2071	218,435	218,435	4.430%		4.430%			209,470		
503		FY 2038 Subtotal:	-	-	-	655,306	620,806						611,840		
504	2039	Replacements	-	3/31/2026	3/31/2071	218,435	8,966	4.430%		4.430%			8,966		
505	2039	Replacements	-	3/31/2027	3/31/2072	218,435	218,435	4.430%		4.430%			218,435		
506	2039	Replacements	-	3/31/2028	3/31/2073	218,435	218,435	4.430%		4.430%			218,435		
507	2039	Replacements	-	3/31/2029	3/31/2074	218,435	218,435	4.430%		4.430%			202,426		
508		FY 2039 Subtotal:	-	-	-	873,742	664,272						648,262		
509	2040	Replacements	-	3/31/2029	3/31/2074	218,435	16,010	4.430%		4.430%			16,010		
510	2040	Replacements	-	3/31/2030	3/31/2075	218,435	218,435	4.430%		4.430%			218,435		
511	2040	Replacements	-	3/31/2031	3/31/2076	218,435	218,435	4.430%		4.430%			218,435		
512	2040	Replacements	-	3/31/2032	3/31/2077	218,435	218,435	4.430%		4.430%			218,435		
513	2040	Replacements	-	3/31/2033	3/31/2078	218,435	218,435	4.430%		4.430%			13,323		
514		FY 2040 Subtotal:	-	-	-	1,092,177	889,751						684,639		
515	2041	Replacements	-	3/31/2033	3/31/2078	218,435	205,112	4.430%		4.430%			205,112		
516	2041	Replacements	-	3/31/2034	3/31/2079	218,435	218,435	4.430%		4.430%			218,435		
517	2041	Replacements	-	3/31/2035	3/31/2080	218,435	218,435	4.430%		4.430%			218,435		
518	2041	Replacements	-	3/31/2036	3/31/2081	218,435	218,435	4.430%		4.430%			70,925		
519		FY 2041 Subtotal:	-	-	-	873,742	860,418						712,908		
520	2042	Replacements	-	3/31/2036	3/31/2081	218,435	147,510	4.430%		4.430%			147,510		
521	2042	Replacements	-	3/31/2037	3/31/2082	218,435	218,435	4.430%		4.430%			218,435		
522	2042	Replacements	-	3/31/2038	3/31/2083	218,435	218,435	4.430%		4.430%			218,435		
523	2042	Replacements	-	3/31/2039	3/31/2084	218,435	218,435	4.430%		4.430%			75,640		
524		FY 2042 Subtotal:	-	-	-	873,742	802,816						660,020		
525	2043	Replacements	-	3/31/2039	3/31/2084	218,435	142,796	4.430%		4.430%			142,796		

TABLE 13D
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(\$000s) (FY 2019)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
526	2043	Replacements	-	3/31/2040	3/31/2085	218,435	218,435	4.430%	4.430%				218,435		
527	2043	Replacements	-	3/31/2041	3/31/2086	218,435	218,435	4.430%	4.430%				218,435		
528	2043	Replacements	-	3/31/2042	3/31/2087	218,435	218,435	4.430%	4.430%				175,722		
529		FY 2043 Subtotal:	-	-	-	873,742	798,102						755,389		
530	2044	Replacements	-	3/31/2042	3/31/2087	218,435	42,713	4.430%	4.430%				42,713		
531	2044	Replacements	-	3/31/2043	3/31/2088	218,435	218,435	4.430%	4.430%				218,435		
532		FY 2044 Subtotal:	-	-	-	436,871	261,149						261,149		
533	2045	Replacements	-	3/31/2044	3/31/2089	218,435	218,435	4.430%	4.430%				218,435		
534		FY 2045 Subtotal:	-	-	-	218,435	218,435						218,435		
535	2046	Replacements	-	3/31/2045	3/31/2090	218,435	218,435	4.430%	4.430%				218,435		
536		FY 2046 Subtotal:	-	-	-	218,435	218,435						218,435		
537	2047	Replacements	-	3/31/2046	3/31/2091	218,435	218,435	4.430%	4.430%				218,435		
538		FY 2047 Subtotal:	-	-	-	218,435	218,435						218,435		
539	2048	Replacements	-	3/31/2047	3/31/2092	218,435	218,435	4.430%	4.430%				218,435		
540		FY 2048 Subtotal:	-	-	-	218,435	218,435						218,435		
541	2049	Replacements	-	3/31/2048	3/31/2093	218,435	218,435	4.430%	4.430%				218,435		
542		FY 2049 Subtotal:	-	-	-	218,435	218,435						218,435		
543	2050	Replacements	-	3/31/2049	3/31/2094	218,435	218,435	4.430%	4.430%				218,435		
544		FY 2050 Subtotal:	-	-	-	218,435	218,435						218,435		
545	2051	Replacements	-	3/31/2050	3/31/2095	218,435	218,435	4.430%	4.430%				218,435		
546		FY 2051 Subtotal:	-	-	-	218,435	218,435						218,435		
547	2052	Replacements	-	3/31/2051	3/31/2096	218,435	218,435	4.430%	4.430%				218,435		
548		FY 2052 Subtotal:	-	-	-	218,435	218,435						218,435		
549	2053	Replacements	-	3/31/2052	3/31/2097	218,435	218,435	4.430%	4.430%				218,435		
550		FY 2053 Subtotal:	-	-	-	218,435	218,435						218,435		
551	2054	Replacements	-	3/31/2053	3/31/2098	218,435	218,435	4.430%	4.430%				218,435		
552		FY 2054 Subtotal:	-	-	-	218,435	218,435						218,435		
553	2055	Replacements	-	3/31/2054	3/31/2099	218,435	218,435	4.430%	4.430%				218,435		
554		FY 2055 Subtotal:	-	-	-	218,435	218,435						218,435		
555	2056	Replacements	-	3/31/2055	3/31/2100	218,435	218,435	4.430%	4.430%				218,435		
556		FY 2056 Subtotal:	-	-	-	218,435	218,435						218,435		
557	2057	Replacements	-	3/31/2056	3/31/2101	218,435	218,435	4.430%	4.430%				218,435		
558		FY 2057 Subtotal:	-	-	-	218,435	218,435						218,435		
559	2058	Boise	Bureau of Reclamation	9/30/2008	9/30/2058	64	64	4.875%	4.875%				64		
560	2058	Bonneville Dam	Corps of Engineers	9/30/2008	9/30/2058	14,609	14,609	4.875%	4.875%				14,609		
561	2058	Columbia River Fish Mitigation	Corps of Engineers	9/30/2008	9/30/2058	36,554	36,554	4.875%	4.875%				36,554		
562	2058	Dworshak	Corps of Engineers	9/30/2008	9/30/2058	10	10	4.875%	4.875%				10		
563	2058	Hungry Horse Dam	Bureau of Reclamation	9/30/2008	9/30/2058	76	76	4.875%	4.875%				76		
564	2058	Ice Harbor	Corps of Engineers	9/30/2008	9/30/2058	14	14	4.875%	4.875%				14		
565	2058	Libby	Corps of Engineers	9/30/2008	9/30/2058	1,567	1,567	4.875%	4.875%				1,567		
566	2058	Little Goose	Corps of Engineers	9/30/2008	9/30/2058	13	13	4.875%	4.875%				13		
567	2058	Lower Granite	Corps of Engineers	9/30/2008	9/30/2058	24	24	4.875%	4.875%				24		
568	2058	Lower Monument	Corps of Engineers	9/30/2008	9/30/2058	9	9	4.875%	4.875%				9		
569	2058	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2008	9/30/2058	74	74	4.875%	4.875%				74		
570	2058	McNary	Corps of Engineers	9/30/2008	9/30/2058	215	215	4.875%	4.875%				215		
571	2058	The Dalles	Corps of Engineers	9/30/2008	9/30/2058	1,651	1,651	4.875%	4.875%				1,651		
572	2058	Chief Joseph	Corps of Engineers	9/30/2008	9/30/2058	3,500	3,500	4.875%	4.875%				3,500		
573	2058	Columbia Basin	Bureau of Reclamation	9/30/2008	9/30/2058	835	835	4.875%	4.875%				835		
574	2058	Replacements	-	3/31/2057	3/31/2102	218,435	218,435	4.430%	4.430%				218,435		
575		FY 2058 Subtotal:	-	-	-	277,651	277,651						277,651		
576	2059	Albani Falls	Corps of Engineers	9/30/2009	9/30/2059	57	57	4.375%	4.375%				57		
577	2059	Columbia Basin	Bureau of Reclamation	9/30/2009	9/30/2059	1,338	1,338	4.375%	4.375%				1,338		
578	2059	Hungry Horse Dam	Bureau of Reclamation	9/30/2009	9/30/2059	60	60	4.375%	4.375%				60		
579	2059	John Day	Corps of Engineers	9/30/2009	9/30/2059	1,548	1,548	4.375%	4.375%				1,548		
580	2059	Yakima Chandler/Kenniwick	Bureau of Reclamation	9/30/2009	9/30/2059	15	15	4.375%	4.375%				15		
581	2059	Replacements	-	3/31/2058	3/31/2103	218,435	218,435	4.430%	4.430%				218,435		
582		FY 2059 Subtotal:	-	-	-	221,454	221,454						221,454		

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount
583	2060	Replacements	-	3/31/2059	3/31/2104	218,435	218,435	4.430%	4.430%				218,435		
584		FY 2060 Subtotal:	-	-	-	218,435	218,435						218,435		
585	2061	Replacements	-	3/31/2060	3/31/2105	218,435	218,435	4.430%	4.430%				218,435		
586		FY 2061 Subtotal:	-	-	-	218,435	218,435						218,435		
587	2062	Replacements	-	3/31/2061	3/31/2106	218,435	218,435	4.430%	4.430%				218,435		
588		FY 2062 Subtotal:	-	-	-	218,435	218,435						218,435		
589	2063	Replacements	-	3/31/2062	3/31/2107	218,435	218,435	4.430%	4.430%				218,435		
590		FY 2063 Subtotal:	-	-	-	218,435	218,435						218,435		
591	2064	Replacements	-	3/31/2063	3/31/2108	218,435	218,435	4.430%	4.430%				218,435		
592		FY 2064 Subtotal:	-	-	-	218,435	218,435						218,435		
593	2065	Replacements	-	3/31/2064	3/31/2109	218,435	218,435	4.430%	4.430%				218,435		
594		FY 2065 Subtotal:	-	-	-	218,435	218,435						218,435		
595	2066	Replacements	-	3/31/2065	3/31/2110	218,435	218,435	4.430%	4.430%				218,435		
596		FY 2066 Subtotal:	-	-	-	218,435	218,435						218,435		
597	2067	Replacements	-	3/31/2066	3/31/2111	218,435	218,435	4.430%	4.430%				218,435		
598		FY 2067 Subtotal:	-	-	-	218,435	218,435						218,435		
599	2068	Replacements	-	3/31/2067	3/31/2112	218,435	218,435	4.430%	4.430%				218,435		
600		FY 2068 Subtotal:	-	-	-	218,435	218,435						218,435		
601	2069	Replacements	-	3/31/2068	3/31/2113	218,435	218,435	4.430%	4.430%				218,435		
602		FY 2069 Subtotal:	-	-	-	218,435	218,435						218,435		
603	Grand Total					19,044,233	17,485,744						16,023,912	12,887	3,125

TABLE 13E:
Summary of Interest, Shift Study
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

Obligation Type	General Project	Specific Project	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Bureau of Reclamation		Boise	295	54	54	54	54	54	54	54	54	54	54	54	54	54	4	4	3	
		Columbia Basin	5,551	5,055	5,055	4,219	3,835	3,709	1,494	1,494	1,207	988	988	988	988	988	988	380	380	291
		Columbia Basin 3rd Powerhouse	903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hungry Horse Dam	709	257	225	225	225	225	225	225	225	225	225	225	225	225	74	59	59	59
		Minidoka/Paisades	4,274	634	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632
		RRP - Green Springs	655	655																
		Yakima Chandler/Kenniwick	43	43	43	43	43	43	43	43	43	43	43	43	43	43	1	1	1	1
		Yakima Roza	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau of Reclamation Subtotal:	12,431	6,700	6,009	5,173	4,789	4,663	2,448	2,448	2,161	1,942	1,942	1,942	1,942	1,942	1,748	1,075	1,075	985
	Appropriation		Albeni Falls	208	29	29	29	29	29	29	29	29	29	29	29	29	29	4	4	4
		Bonneville 2nd Powerhouse	2,738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville Dam	7,164	6,884	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,213	5,213	4,172	4,172	2,500	1,433	1,433	
		Chief Joseph	1,895	1,325	1,325	1,325	1,325	1,325	1,325	1,325	1,325	1,305	1,305	1,305	1,305	1,254	1,254	1,254	1,254	
		Columbia River Fish Mitigation	62,178	59,849	62,523	64,822	64,822	64,822	64,822	64,822	64,822	64,338	64,338	63,224	62,975	55,499	51,473	42,875	30,470	
		Cougar	765	763	763	763	763	763	763	763	763	763	763	763	763	763	569	146	146	136
		Detroit Lake/Big Cliff	101	99	99	82	82	82	82	82	82	81	81	81	81	81	70	17	17	17
		Dworshak	854	225	225	225	225	225	225	225	225	214	214	180	180	141	105	105	105	
		Green Peter/Foster	37	35	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
		Hills Creek	171	8	8	8	8	8	8	8	8	8	8	8	8	8	5	5	5	
Corps of Engineers		Ice Harbor	921	857	812	812	812	812	812	812	812	561	508	281	281	278	278	278	164	
		John Day	1,653	864	827	827	827	827	827	827	827	639	639	487	487	342	330	303	303	
		Libby	1,515	411	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	
		Little Goose	862	426	155	155	155	155	155	155	155	154	154	150	150	143	143	143	4	
		Lookout Dam	740	423	423	423	423	423	423	423	423	423	423	423	423	39	11	11	11	
		Lost Creek	17	9																
		Lower Granite	860	767	648	648	648	648	648	648	648	532	532	532	532	509	509	509	261	
		Lower Monument	741	586	392	392	392	392	392	392	392	391	391	207	207	178	178	166	64	
		McNary	744	698	637	637	637	637	637	637	637	637	637	637	637	307	274	274	90	
		The Dalles	2,413	2,112	2,112	2,112	2,112	2,112	2,112	2,112	2,112	2,044	2,044	2,035	2,035	189	182	90	90	
	Corps of Engineers Subtotal:	86,580	76,370	76,472	78,755	78,755	78,755	78,755	78,755	78,755	77,440	77,387	74,290	74,042	62,127	56,450	47,537	34,296		
Lower Snake Fish & Wildlife		Lower Snake Fish and Wildlife	16,572	225	206	206	206	206	206	206	206	157	157	144	144	139	139	122	55	
		Lower Snake Fish & Wildlife Subtotal:	16,572	225	206	206	206	206	206	206	206	157	157	144	144	139	139	122	55	
		Appropriation Subtotal:	115,582	83,295	82,688	84,134	83,750	83,624	81,409	81,409	81,122	79,539	79,486	76,377	76,128	64,015	57,664	48,735	35,336	
		(Less Interest Income)	(632)	(611)	(1,144)	(975)	(1,006)	(898)	(977)	(951)	(847)	(928)	(889)	(784)	(1,861)	(1,585)	(1,690)	(2,030)	(2,048)	
		Bureau Direct	29,897	30,768	33,493	36,480	33,936	31,396	31,182	30,615	30,615	30,615	30,615	30,615	29,056	23,331	15,319	12,859	9,246	
		Interest Accrual	5,735	5,963	5,310	4,287	4,122	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	2,407	1,416	1,283	456	
		Interest Accrual Reversal	(5,664)	(5,735)	(5,963)	(5,310)	(4,287)	(4,122)	(4,122)	(3,667)	(3,667)	(3,667)	(3,667)	(3,667)	(3,667)	(3,342)	(2,407)	(1,416)	(1,283)	
		Conservation	9,405	9,407	9,252	9,252	9,252	8,774	7,654	2,837	2,095	937	211	92	-	-	-	-	-	
		Interest Accrual	2,109	2,058	2,058	2,058	1,978	1,920	973	713	609	76	76	-	-	-	-	-	-	
		Interest Accrual Reversal	(2,074)	(2,109)	(2,058)	(2,058)	(1,978)	(1,920)	(973)	(713)	(609)	(76)	(76)	-	-	-	-	-	-	
BPA Borrowing		Construction (AS)	710	678	736	751	545	423	385	338	195	-	-	-	-	-	-	-	-	
		Interest Accrual	179	172	152	58	24	-	-	-	-	-	-	-	-	-	-	-	-	
		Interest Accrual Reversal	(184)	(179)	(172)	(152)	(58)	(24)	-	-	-	-	-	-	-	-	-	-	-	
		Corps	1,946	3,719	8,945	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,813	13,423	12,013	8,545
		Interest Accrual	863	1,295	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,564	979	833	394
		Interest Accrual Reversal	(718)	(863)	(1,295)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,695)	(1,564)	(979)	(833)	
		Fish and Wildlife	10,958	11,830	12,958	13,613	13,613	13,613	12,644	12,658	11,699	10,259	7,670	6,605	5,091	4,382	4,293	4,241	3,369	
		Interest Accrual	1,998	1,998	1,688	1,688	1,688	1,688	1,445	1,445	1,445	865	430	430	5	5	-	-	-	
		Interest Accrual Reversal	(1,998)	(1,998)	(1,998)	(1,688)	(1,688)	(1,688)	(1,688)	(1,688)	(1,445)	(1,445)	(865)	(430)	(430)	(5)	(5)	-	-	
		Technology (G)	555	667	789	947	690	432	280	79	-	-	-	-	-	-	-	-	-	
	Interest Accrual	92	92	92	92	7	-	-	-	-	-	-	-	-	-	-	-	-		
	Interest Accrual Reversal	(92)	(92)	(92)	(92)	(7)	(7)	-	-	-	-	-	-	-	-	-	-	-		
	BPA Borrowing Subtotal:	53,085	57,058	64,449	72,764	70,481	67,464	63,580	58,885	57,466	53,583	50,986	50,265	45,348	38,875	29,764	26,803	17,845		
Federal Generation Replacements		Replacements	-	-	-	4,838	14,515	24,192	33,868	43,545	53,222	62,898	72,575	82,252	91,929	101,605	111,282	120,959	130,635	
		Federal Generation Replacements Subtotal:	-	-	-	4,838	14,515	24,192	33,868	43,545	53,222	62,898	72,575	82,252	91,929	101,605	111,282	120,959	130,635	
		Treasury Subtotal:	53,085	57,058	64,449	77,603	84,996	91,656	97,448	102,430	110,688	116,482	123,561	132,516	137,277	140,480	141,046	147,762	148,481	
		Grand Total:	\$168,667	\$140,253	\$147,136	\$161,736	\$168,745	\$175,279	\$178,857	\$183,839	\$191,810	\$196,021	\$203,047	\$208,893	\$213,405	\$204,495	\$198,710	\$196,497	\$183,817	

TABLE 13E:
Summary of Interest, Shift Study
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

Obligation Type	General Project	Specific Project	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
		Boise	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		Columbia Basin	254	188	162	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hungry Horse Dam	26	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Bureau of Reclamation	Minidoka/Palsades	632	632	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Chandler/Kenniwick	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau of Reclamation Subtotal:	915	830	172	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
		Albeni Falls	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville Dam	1,134	1,134	720	712	712	712	712	712	712	712	712	712	712	712	712	712	712	712
		Chief Joseph	172	172	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
		Columbia River Fish Mitigation	28,055	18,989	6,036	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782
		Cougar	133	133	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Appropriation	Detroit Lake/Big Cliff	17	16	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Green Peter/Foster	23	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hills Creek	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Corps of Engineers	Ice Harbor	155	124	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		John Day	288	281	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
		Libby	83	77	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
		Little Goose	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Lookout Dam	11	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Granite	212	109	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Lower Monument	64	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		McNary	90	40	39	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
		The Dalles	90	90	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
		Corps of Engineers Subtotal:	30,538	21,200	7,331	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906
	Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	54	46	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		Lower Snake Fish & Wildlife Subtotal:	54	46	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Appropriation Subtotal:		31,507	22,076	7,507	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019
		(Less Interest Income)	(2,038)	(2,068)	(2,154)	(2,165)	(2,224)	(2,360)	(2,399)	(2,456)	(2,492)	(2,525)	(2,172)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)
		Bureau Direct	3,241	1,202	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	39	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	(456)	(39)	(39)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BPA Borrowing	Corps	4,265	1,786	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Treasury	Interest Accrual	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	(394)	(2)	(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fish and Wildlife	1,712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BPA Borrowing Subtotal:	6,372	919	(2,066)	(2,165)	(2,224)	(2,360)	(2,399)	(2,456)	(2,492)	(2,525)	(2,172)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)
	Federal Generation Replacements	Replacements	140,312	149,989	152,162	141,721	125,231	106,997	87,150	65,871	45,137	23,462	10,623	9,677	9,677	9,677	9,677	9,677	9,677	9,677
		Federal Generation Replacements Subtotal:	140,312	149,989	152,162	141,721	125,231	106,997	87,150	65,871	45,137	23,462	10,623	9,677	9,677	9,677	9,677	9,677	9,677	9,677
	Treasury Subtotal:		146,684	150,908	150,096	139,556	123,007	104,637	84,751	63,415	42,645	20,937	8,451	8,668	8,668	8,668	8,668	8,668	8,668	8,668
Grand Total:			\$178,191	\$172,984	\$157,603	\$142,575	\$126,026	\$107,656	\$87,770	\$66,433	\$45,663	\$23,956	\$11,469	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687

TABLE 13E:
Summary of Interest, Shift Study
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

Obligation Type	General Project	Specific Project	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	Total		
Bureau of Reclamation		Boise	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	1,084		
		Columbia Basin	99	99	99	99	99	99	99	99	59	-	-	-	-	-	-	-	-	-	-	40,459	
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	903	
		Hungry Horse Dam	6	6	6	6	6	6	6	6	3	-	-	-	-	-	-	-	-	-	-	3,871	
		Minidoka/Palsades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,646	
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,311	
		Yakima Chandler/Kenniwick	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	584	
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
		Bureau of Reclamation Subtotal:	109	109	109	109	109	109	109	109	62	-	-	-	-	-	-	-	-	-	-	63,860	
		Albeni Falls	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	662	
Appropriation		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,738	
		Bonneville Dam	712	712	712	712	712	712	712	-	-	-	-	-	-	-	-	-	-	-	95,865		
		Chief Joseph	171	171	171	171	171	171	171	171	-	-	-	-	-	-	-	-	-	-	-	26,998	
		Columbia River Fish Mitigation	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	-	-	-	-	-	-	-	-	-	-	-	1,100,961	
		Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,306	
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,283	
		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,806	
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	452	
		Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	295	
		Corps of Engineers	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	10,385	
Lower Snake Fish & Wildlife		John Day	68	68	68	68	68	68	68	68	-	-	-	-	-	-	-	-	-	-	-	14,033	
		Libby	76	76	76	76	76	76	76	76	-	-	-	-	-	-	-	-	-	-	-	5,107	
		Little Goose	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	3,434	
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,908	
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	
		Lower Granite	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	10,426	
		Lower Monument	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,934	
		McNary	10	10	10	10	10	10	10	10	-	-	-	-	-	-	-	-	-	-	-	8,915	
		The Dalles	80	80	80	80	80	80	80	80	-	-	-	-	-	-	-	-	-	-	-	30,050	
		Corps of Engineers Subtotal:	2,906	2,906	2,906	2,906	2,906	2,906	2,906	2,906	70	-	-	-	-	-	-	-	-	-	-	1,338,589	
	Lower Snake Fish & Wildlife Subtotal:	4	4	4	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-	19,480		
	Appropriation Subtotal:	3,019	3,019	3,019	3,019	3,019	3,019	3,019	3,019	132	-	-	-	-	-	-	-	-	-	-	-	1,421,928	
	(Less Interest Income)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(70,117)	
BPA Borrowing		Bureau Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	474,599	
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,524	
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(66,188)	
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69,169	
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,627	
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(16,701)	
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,761	
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	585	
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(769)	
		Corps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206,595	
Treasury		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,573	
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(25,290)	
		Fish and Wildlife	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161,210	
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,062	
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(19,060)	
		Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,437	
		Interest Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	373	
		Interest Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(464)	
		BPA Borrowing Subtotal:	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	(1,008)	839,926
		Federal Generation Replacements	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	2,238,887
	Federal Generation Replacements Subtotal:	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	9,677	2,238,887	
	Treasury Subtotal:	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	8,668	3,078,813	
Grand Total:			\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$11,687	\$8,800	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$8,668	\$4,509,741	

TABLE 13F:
Summary of Amortization, Shift Study
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

Obligation Type	General Project	Specific Project	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
Bureau of Reclamation		Boise	3,365	-	-	-	-	-	-	-	-	-	-	-	-	979	-	17	-		
		Columbia Basin	6,927	-	14,236	6,543	2,140	37,701	-	4,879	3,727	-	-	-	-	-	11,891	-	1,987	877	
		Columbia Basin 3rd Powerhouse	12,631	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Hungry Horse Dam	6,318	552	-	-	-	-	-	-	-	-	-	-	-	2,951	294	-	-	779	
		Minidoka/Palisesades	50,911	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		RFP - Green Springs	-	11,145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Yakima Chandler/Kerniwick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	833	-	-	-	
		Yakima Roza	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bureau of Reclamation Subtotal:		80,151	11,754	14,236	6,543	2,140	37,701	-	4,879	3,727	-	-	-	-	3,784	13,164	-	2,004	1,656
		Albeni Falls	2,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	-	-	42
		Bonneville 2nd Powerhouse	38,293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Bonneville Dam	3,917	24,446	-	-	-	-	-	2,978	-	19,368	-	31,322	20,849	-	2,628	4,169	-	-	
		Chief Joseph	7,970	-	-	-	-	-	-	347	-	-	-	-	-	992	-	-	-	24,727	
		Columbia River Fish Mitigation	55,768	36,266	2,853	-	-	-	-	8,797	-	20,742	4,624	143,460	79,873	191,054	278,543	56,832	-	-	
		Cougar	26	-	-	-	-	-	-	-	-	-	-	-	-	3,622	8,250	-	230	59	
		Detroit Lake/Big Cliff	38	-	282	-	-	-	-	18	-	-	-	-	-	223	1,031	-	-	-	
	Appropriation		Dworshak	8,803	-	-	-	-	-	199	-	630	-	-	-	761	713	-	2,380	-	
			Green Peter/Foster	26	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			Hills Creek	2,658	8	-	-	-	-	-	2	-	-	-	-	46	-	-	-	-	
			Ice Harbor	986	764	-	-	-	-	-	4,634	990	4,227	-	50	-	-	2,615	207	-	
		John Day	11,433	619	-	-	-	-	-	3,510	-	2,830	-	2,827	233	601	-	-	356		
		Libby	15,441	5,562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40		
		Little Goose	6,102	4,608	-	-	-	-	-	27	-	67	-	146	-	-	3,171	30	-		
		Lookout Dam	5,170	-	-	-	-	-	-	-	-	-	-	7,490	572	-	-	-	-		
		Lost Creek	118	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Lower Granite	1,311	2,025	-	-	-	-	-	2,131	-	-	-	434	-	-	5,669	1,156	-		
	Lower Monument	2,160	3,301	-	-	-	-	-	29	-	3,423	-	549	-	285	2,332	-	-			
	McNary	635	1,046	-	-	-	-	-	-	-	6,138	-	646	-	4,080	-	-	-			
	The Dalles	4,579	-	-	-	-	-	-	1,226	-	182	-	36,019	140	2,030	-	-	-			
	Corps of Engineers Subtotal:		167,945	78,991	3,135	-	-	-	23,897	990	57,605	4,624	228,588	112,142	198,050	297,569	87,618	-			
	Lower Snake Fish and Wildlife	228,843	325	-	-	-	-	-	897	-	230	-	102	-	379	1,534	11	-			
	Lower Snake Fish & Wildlife Subtotal:		228,843	325	-	-	-	-	897	-	230	-	102	-	379	1,534	11	-			
	Appropriation Subtotal:		476,940	91,070	17,372	6,543	2,140	37,701	-	4,879	28,520	990	57,835	4,624	232,474	125,306	198,429	301,107	89,285		
	Bureau Direct		-	-	105,000	120,000	97,000	19,000	-	-	-	-	-	25,000	121,000	188,484	101,516	66,000	222,000		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Conservation		-	29,000	-	-	19,000	16,000	142,000	97,000	69,000	39,000	6,000	25,000	-	-	-	-	-		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Construction (AS)		-	15,150	5,250	18,100	7,000	5,800	3,150	5,600	5,950	-	-	-	-	-	-	-	-		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Corps		-	-	-	-	-	-	-	-	-	-	-	-	-	15,000	53,000	81,389	141,591		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Fish and Wildlife		-	-	46,000	-	-	31,000	-	25,000	-	80,000	55,000	26,000	56,000	8,000	13,000	40,000	51,000		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Technology (G)		-	-	-	-	35,000	14,000	5,000	5,000	-	-	-	-	-	-	-	-	-		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	BPA Borrowing Subtotal:		-	44,150	156,250	138,100	158,000	85,800	150,150	132,600	74,950	119,000	61,000	76,000	177,000	211,484	167,516	187,389	414,591		
	Replacements		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Principal Accrual Reversal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Federal Generation Replacements Subtotal:		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Discounts		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Premiums		-	-	-	-	-	-	-	-	-	-	-	-	-	2,308	4,526	4,955	-	1,098	
	Make Whole Call Subtotal:		-	-	-	-	-	-	-	-	-	-	-	-	-	2,308	4,526	4,955	-	1,098	
	Bond Subtotal:		-	44,150	156,250	138,100	158,000	85,800	150,150	132,600	74,950	119,000	61,000	76,000	177,000	211,484	167,516	187,389	414,591		
	Irrigation Assistance		50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347		
	Irrigation Assistance Subtotal:		50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347		
	Irrigation Subtotal:		50,769	27,234	56,573	24,317	14,747	16,060	12,846	15,117	13,543	20,755	6,118	11,186	4,065	1,996	10,524	-	4,347		
Grand Total:			\$527,709	\$162,454	\$230,194	\$168,960	\$174,887	\$139,561	\$162,996	\$152,596	\$117,013	\$140,745	\$124,954	\$91,811	\$413,538	\$338,786	\$376,469	\$488,496	\$508,223		

TABLE 13F:
Summary of Amortization, Shift Study
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

Obligation Type	General Project	Specific Project	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
		Boise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Columbia Basin	1,742	922	2,171	-	-	-	-	-	-	-	-	-	-	-	-	-
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bureau of Reclamation	Hungry Horse Dam	515	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Minidoka/Palmsades	-	19,450	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RRP - Green Springs	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Chandler/Kennwick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau of Reclamation Subtotal:	2,257	20,377	2,171	-	-	-	-	-	-	-	-	-	-	-	-	-
		Albeni Falls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville Dam	-	11,064	268	-	-	-	-	-	-	-	-	-	-	-	-	-
		Chief Joseph	-	31	10	-	-	-	-	-	-	-	-	-	-	-	-	-
		Columbia River Fish Mitigation	236,036	387,078	158,903	-	-	-	-	-	-	-	-	-	-	-	-	-
		Cougar	12	423	4,088	-	-	-	-	-	-	-	-	-	-	-	-	-
	Appropriation	Detroit Lake/Big Cliff	18	31	528	-	-	-	-	-	-	-	-	-	-	-	-	-
		Dworshak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Green Peter/Foster	472	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hills Creek	12	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Corps of Engineers	Ice Harbor	819	3,847	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		John Day	175	6,325	17	-	-	-	-	-	-	-	-	-	-	-	-	-
		Libby	152	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Little Goose	-	-	66	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lookout Dam	17	294	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lost Creek	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Granite	2,653	3,475	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Monument	1,430	245	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		McNary	1,324	11	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-
		The Dalles	-	305	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Corps of Engineers Subtotal:	243,125	413,453	164,881	-	-	-	-	-	-	-	-	-	-	-	-	-
	Lower Snake Fish & Wildlife	Lower Snake Fish and Wildlife	222	1,378	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Snake Fish & Wildlife Subtotal:	222	1,378	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Appropriation Subtotal:		245,604	435,208	167,052	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau Direct	130,000	29,000	32,479	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Conservation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Construction (AS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BPA Borrowing	Corps	90,409	53,000	2,396	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fish and Wildlife	44,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bond	Technology (G)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BPA Borrowing Subtotal:	264,409	82,000	34,875	-	-	-	-	-	-	-	-	-	-	-	-	-
		Replacements	-	-	338,751	569,491	611,840	648,262	684,639	712,908	660,020	755,389	261,149	218,435	218,435	218,435	218,435	218,435
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Federal Generation Replacements	Federal Generation Replacements Subtotal:	-	-	338,751	569,491	611,840	648,262	684,639	712,908	660,020	755,389	261,149	218,435	218,435	218,435	218,435	218,435
		Discounts	-	-	(3,125)	-	-	-	-	-	-	-	-	-	-	-	-	-
		Premiums	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Make Whole Call Subtotal:	-	-	(3,125)	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bond Subtotal:		264,409	82,000	376,751	569,491	611,840	648,262	684,639	712,908	660,020	755,389	261,149	218,435	218,435	218,435	218,435	218,435
	Irrigation	Irrigation Assistance	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-
		Irrigation Assistance Subtotal:	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-
		Irrigation Subtotal:	-	7,761	28,920	15,778	-	14,181	-	-	73,659	-	-	11,579	-	-	-	-
Grand Total:			\$510,012	\$524,969	\$572,724	\$585,269	\$611,840	\$662,444	\$684,639	\$712,908	\$733,679	\$755,389	\$261,149	\$230,014	\$218,435	\$218,435	\$218,435	\$218,435

TABLE 13F:
Summary of Amortization, Shift Study
October 1, 2015 - September 30, 2019 Cost Evaluation Period
(\$000s) (FY 2019)

Obligation Type	General Project	Specific Project	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	Total	
Bureau of Reclamation		Boise	-	-	-	-	-	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	4,425	
		Columbia Basin	-	-	-	-	-	-	-	-	835	1,338	-	-	-	-	-	-	-	-	-	-	-	97,915
		Columbia Basin 3rd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,631
		Hungry Horse Dam	-	-	-	-	-	-	-	-	76	60	-	-	-	-	-	-	-	-	-	-	-	11,549
		Minidoka/Palisades	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70,403
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,148
		Yakima Chandler/Kemniwick	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	848
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
		Bureau of Reclamation Subtotal:										975	1,414											208,933
		Alberti Falls	-	-	-	-	-	-	-	-	-	57	-	-	-	-	-	-	-	-	-	-	-	3,090
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38,293
		Bonneville Dam	-	-	-	-	-	-	-	-	-	14,609	-	-	-	-	-	-	-	-	-	-	-	135,618
		Chief Joseph	-	-	-	-	-	-	-	-	-	3,500	-	-	-	-	-	-	-	-	-	-	-	37,578
		Columbia River Fish Mitigation	-	-	-	-	-	-	-	-	-	36,554	-	-	-	-	-	-	-	-	-	-	-	1,697,384
	Appropriation		Cougar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,710
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,168
		Dworshak	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	13,495
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	863
		Hills Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,867
		Ice Harbor	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	19,152
		John Day	-	-	-	-	-	-	-	-	-	-	1,548	-	-	-	-	-	-	-	-	-	-	30,473
		Libby	-	-	-	-	-	-	-	-	-	1,567	-	-	-	-	-	-	-	-	-	-	-	22,777
		Little Goose	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	14,231
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,543
		Lost Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272
		Lower Granite	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	18,878
		Lower Monument	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	13,764
		McNary	-	-	-	-	-	-	-	-	-	215	-	-	-	-	-	-	-	-	-	-	-	15,096
		The Dalles	-	-	-	-	-	-	-	-	-	1,651	-	-	-	-	-	-	-	-	-	-	-	46,132
	Corps of Engineers Subtotal:										58,167	1,605											2,142,385	
	Lower Snake Fish and Wildlife	-	-	-	-	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-	233,996	
	Lower Snake Fish & Wildlife Subtotal:										74												233,996	
	Appropriation Subtotal:										59,216	3,018											2,585,313	
	Bureau Direct																						1,256,479	
	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Conservation																						442,000	
	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Construction (AS)																						66,000	
	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	BPA Borrowing																						436,784	
	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fish and Wildlife																						475,000	
	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Technology (G)																						59,000	
	Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	BPA Borrowing Subtotal:																						2,735,264	
	Replacements																						10,703,335	
	Principal Accrual	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	218,435	
	Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Federal Generation Replacements																						10,703,335	
	Federal Generation Replacements Subtotal:																						10,703,335	
	Discounts																						(3,125)	
	Premiums																						12,887	
	Make Whole Call																						9,761	
	Make Whole Call Subtotal:																						9,761	
	Bond Subtotal:																						13,441,724	
	Irrigation Assistance																						442,075	
	Irrigation Assistance Subtotal:																						442,075	
	Irrigation Subtotal:																						442,075	
Grand Total:			\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$218,435	\$16,469,111	

14. REPAYMENT THEORY AND OPERATION

14.1 Introduction

The Bonneville Power Administration (BPA) is required to collect sufficient revenues to meet the annual expenses and cover the long-term obligations of the Federal Columbia River Power System (FCRPS).

The Repayment Program is used to determine whether a given set of annual revenues is sufficient to meet a given set of annual expenses and cover a given set of long-term obligations when applied in accordance with the requirements of Department of energy (DOE) Order RA 6120.2. The Program is also used to determine by what minimum factor the future revenues can be multiplied to obtain a new set of revenues which will be sufficient.

The revenues and expenses of the cost evaluation year will be assigned to all future years. This will have the effect of levelizing the long-term obligations over all future years.

14.2 Repayment Program Logic

The diagrams on the following pages show the flow of logic in BPA's repayment program. The first diagram shows the logic of the binary search used to locate minimum sufficient revenues. A necessary part of this search is the test for sufficiency. The logic of the test for sufficiency is shown on the remaining two diagrams.

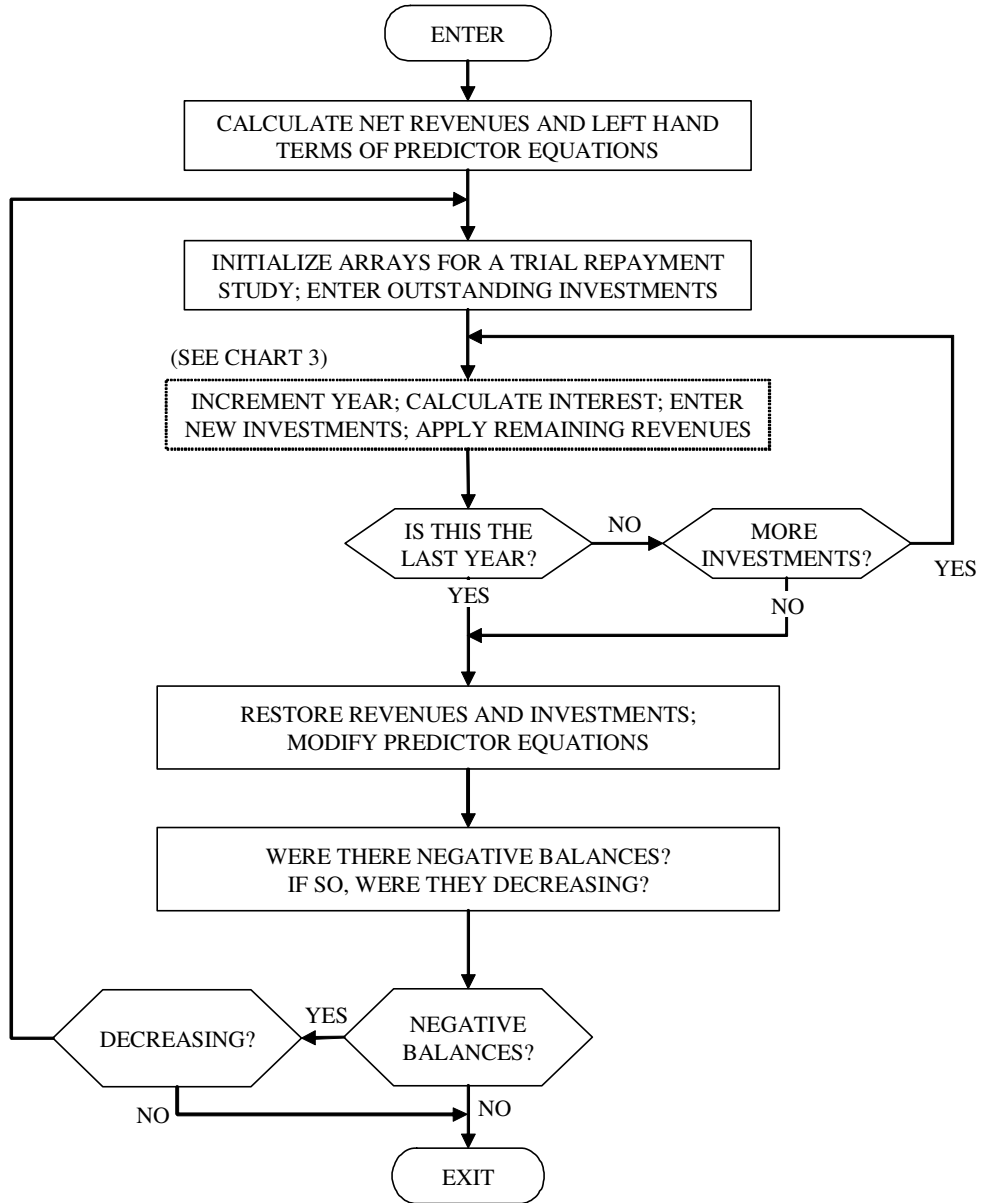
The equations which are referred to are:

- Revenue Equation: Net revenues of each year are expended on interest and payments on the principles.
- Investment equation: The payments on each investment are less than or equal to the principle of that investment (and equal to the principle of that investment after the investment is due).
- Predictor equation: For each future year the accumulated revenues less the accumulated interest less the accumulated investments due is equal to the accumulated payments on high interest rate investments which are not due.

14.3 Bond Rollover Feature

Since the 2002 Wholesale Power Rate Case, BPA has incorporated a new data manipulation feature associated with the repayment program. This does not change any methodology of the model. It allows the user to assume that short-term bond(s) associated with assets with average service lives considerably longer than the bond maturity date are refinanced on the original maturity date, and recognizes replacement bonds with new maturity dates and corresponding interest rates. This feature reflects BPA's practice of rolling over a bond when it comes due if funds are not available to pay it at that time or if market conditions justify refinancing such bonds within the allowable repayment period of the associated assets. Reflecting this practice in the model allows a more realistic calculation of interest expense.

**REPAYMENT PROGRAM
(TEST FOR SUFFICIENCY)**



**REPAYMENT PROGRAM
(APPLICATION OF REVENUES)**

