TRINITY RIVER FLOW EVALUATION

Final Report

A report to the:

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U.S. Department of the Interior
Washington, D.C.

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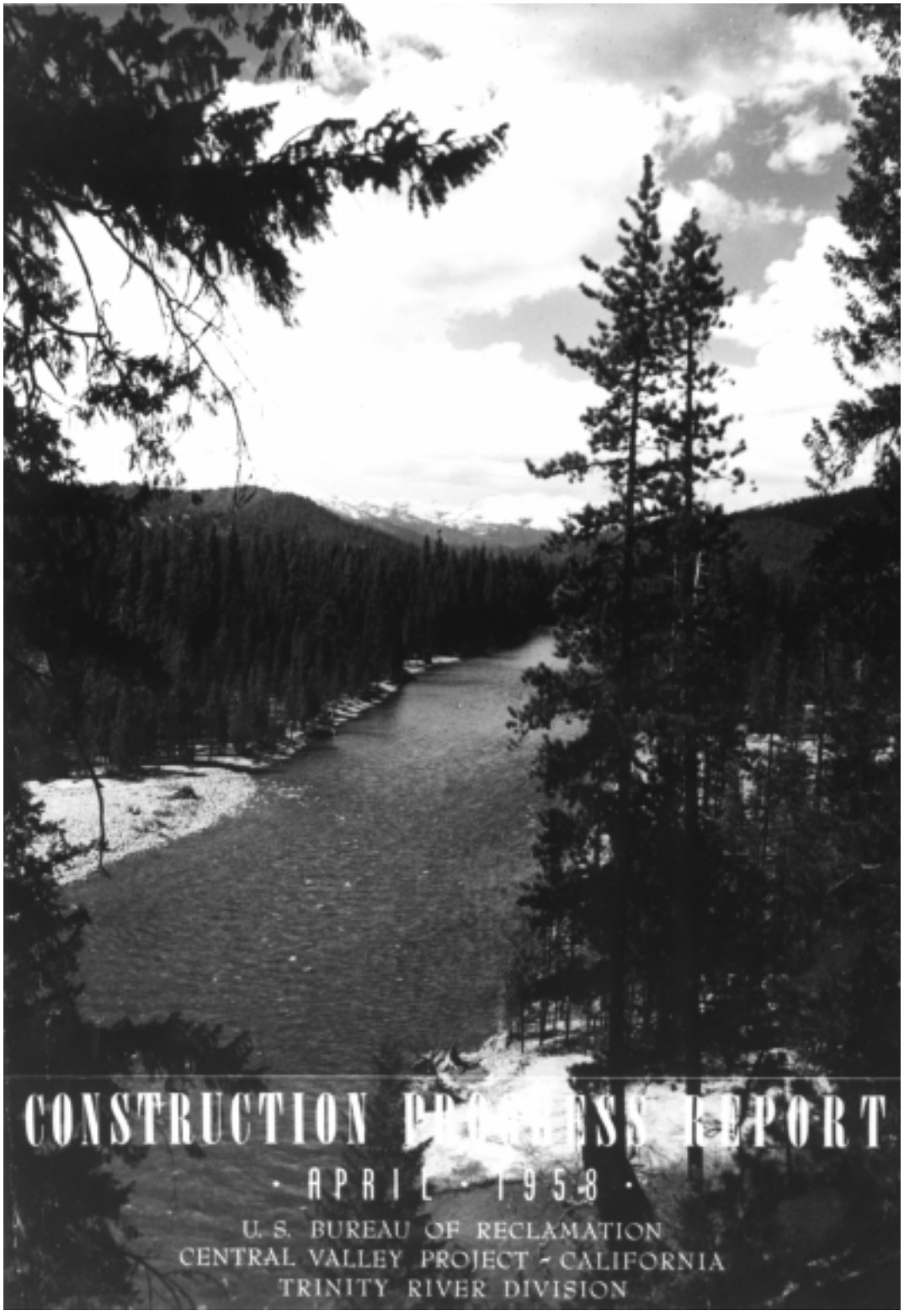
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CENTRAL VALLEY PROJECT - CALIFORNIA
TRINITY RIVER DIVISION

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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Individuals that assisted in preparation and review of the TRFE include: Mike Aceituno (USFWS), Bernard Aguilar (CDFG), Cindy Barry (USFWS), John Bartholow (USGS), Randy Bentin (CDFG), Scott Bergstrom (DOI Solicitor), Ted Boling (DOI), J. Craig Fischenich (USCE), Troy Fletcher (Yurok Tribe), J. Scott Foott (USFWS), Rowan Gould (USFWS), Bruce Halstead (USFWS), Mark Hampton (Northstate Resources), Dana Jacobsen (DOI Solicitor), Tom Kisanuki (USFWS), Matt Kondolf (UC-Berkeley), Richard Levin (Hoopa Valley Tribe), Dan Licht (USFWS), Amy Lind (USFS), Bob McCallister (CDFG), Rod McLeod (USFWS), Joe Membrino (Counsel, Hoopa Valley Tribe), Robert Milhouse (USGS), Tammy Newcomb (USFWS), Mike Orcutt (Hoopa Valley Tribe), Tim Randle (USBOR), Harry Rectenwald (CDFG), Russ Smith (USBOR), Gary Smith (CDFG), Dave Wegner, Peter Wilcock (Johns Hopkins Univ.), and Mark Zuspan (CDFG). Many of these individuals participated as subject matter experts in the series of meetings held in Eureka.

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CONVERSION FACTORS

This report uses English rather than metric units of measure. Water managers in the United States measure water in English units: TAF (thousand acre-feet) and cfs (cubic feet per second). The metric equivalents of these measures, dam^3 (cubic dekameters) and cms (cubic meters per second), are rarely used in the water industry and would have required conversion. The table below is provided for those who require the metric standard.

Quantity	To Convert from English Unit	To Metric Unit	Multiply English Unit by	To Convert to English from Metric Multiply Metric Unit by
Length	inches (in)	millimeters (mm)	25.4	0.03937
	inches (in)	centimeters (cm)	2.54	0.3937
	feet (ft)	meters (m)	0.3048	3.2808
	yards (yd)	meters (m)	0.9144	1.094
	miles (mi)	kilometers (km)	1.6093	0.62139
Area	square feet (ft^2)	square meters (m^2)	0.092903	10.764
	square miles (mi^2)	square kilometers (km^2)	2.59	0.3861
Volume	cubic feet (ft^3)	cubic meters (m^3)	0.028317	35.315
	cubic yards (yd^3)	cubic meters (m^3)	0.76455	1.308
	acre-feet (ac-ft)	cubic dekameters (dam^3)	1.2335	0.8107
	thousand acre-feet (TAF)	cubic dekameters (dam^3)	1233.5	0.0008107
Flow	cubic feet per second (cfs)	cubic meters per second (cms)	0.028317	35.315
Velocity	feet per second (ft/s)	meters per second (m/s)	0.3048	3.2808
Temperature	degrees Fahrenheit (^oF)	degrees Celsius (^oC)	(^oF - 32) /1.8	(1.8 x ^oC) + 32

ACRONYMS FOR THE TRINITY RIVER FLOW EVALUATION

ac-ft	acre-feet
AEAM	Adaptive Environmental Assessment and Management
AEAMP	Adaptive Environmental Assessment and Management Program
AMTG	Adaptive Management Technical Group
BETTER	Box Exchange Transport Temperature and Ecology of a Reservoir Model
BLM	U.S. Bureau of Land Management
BREACH	"Breach" model, (National Weather Service)
CDFG	California Department of Fish and Game
cfs	cubic feet per second
CRWQCB-NCR	California Regional Water Quality Control Board-North Coast Region
CSSC	California Species of Special Concern
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DEQ	Department of Environmental Quality
DMBRK	"Dam Break" model, (National Weather Service)
DOI	[U.S.] Department of the Interior
DWR	[California] Department of Water Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	[U.S.] Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
FLDWAV	"Flood wave" model, (National Weather Service)
FMP	Fishery Management Plan
FONSI	Finding of no significant impact
fps	foot-per-second or feet-per-second
HABTAE	Habitat Simulation Model
HEC	Hydraulic Engineering Center model (U.S. Army Corps of Engineers)
HSC	Habitat Suitability Criteria
HSI	Habitat Suitability Index
HVT	Hoopa Valley Tribe
IFIM	Instream Flow Incremental Methodology
KRTAT	Klamath River Technical Advisory Team
lbs	Pounds
LWD	Large Woody Debris
MESC	Midcontinent Ecological Science Center
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
OCAP	Operating Criteria and Procedures
PFMC	Pacific Fishery Management Council

PHABSIM	Physical Habitat Simulation Model
P.L.	Public Law
Program	Trinity River Basin Fish and Wildlife Program
PROSIM	Project Simulation Model
RAS	River Analysis System (model)
RFP	Request for proposals
RHABSIM	Riverine Habitat Simulation Model
R.	River
RM	river mile
RSL	Redwood Sciences Laboratory
SAB	Scientific Advisory Board
SALMOD	Salmonid Potential Production Model
Secretary	Secretary of the Interior
Service	U.S. Fish and Wildlife Service
SALUL	*Salix lucida ssp. lasiandra*
SMUD	Sacramento Municipal Utility District
SNTEMP	Stream Network Temperature Model
TAF	thousand acre-feet
Task Force	Trinity River Basin Fish and Wildlife Task Force
TCRCD	Trinity County Resource Conservation District
TMAT	Technical Modeling and Analysis Team
TMC	Trinity Management Council
TMG	Trinity Management Group
TRBFWTF	Trinity River Basin Fish and Wildlife Task Force
TRD	Trinity River Division
TRFE	Trinity River Flow Evaluation
TRFH	Trinity River Fish Hatchery
TRRP	Trinity River Restoration Program
TRNMOD	Water Management Policy Simulation Model for the Trinity River, CA
TSLIB	Time Series
USBOR	U.S. Bureau of Reclamation
USCE	U.S. Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USHOR	U.S. House of Representatives
Q	river discharge
WQRRS	Water Quality for River-Reservoir Systems model (U.S. Army Corps of Engineers)
WUA	weighted usable area
WY	water year
XS	cross section

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