

# TABLE OF CONTENTS

1			
2	LIST OF FIGURES.....		xii
3	LIST OF TABLES .....		xiii
4	ACRONYMS AND ABBREVIATONS.....		xvi
5	EXECUTIVE SUMMARY.....		xix
6	1.0 PURPOSE OF ACTION AND NEED FOR POWER.....		1
7	1.1 PURPOSE OF ACTION.....		1
8	1.2 NEED FOR POWER.....		3
9	1.3 INTERVENTIONS.....		5
10	1.4 SCOPING PROCESS.....		6
11	1.5 AGENCY CONSULTATION.....		6
12	1.6 SETTLEMENT AGREEMENT.....		7
13	2.0 PROPOSED ACTION AND ALTERNATIVES.....		9
14	2.1 APPLICANT’S PROPOSAL.....		9
15	2.1.1 Project Description and Operation.....		9
16	2.1.1.1 Project Description.....		9
17	2.1.1.2 Project Operation.....		11
18	2.1.2 Proposed Environmental Measures.....		12
19	2.2 MODIFICATIONS TO APPLICANT’S PROPOSAL.....		19
20	2.2.1 Mandatory Conditions.....		19
21	2.2.1.1 Section 18 of the Federal Power Act—Authority to		
22	Require Fishways.....		19
23	2.2.1.2 Section 4(e) Conditions.....		19
24	2.2.2 Staff’s Alternative.....		20
25	2.3 NO-ACTION ALTERNATIVE.....		22
26	2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM		
27	DETAILED STUDY.....		22
28	2.4.1 Federal Government Takeover of the Project.....		22
29	2.4.2 Issuing a Nonpower License.....		23
30	2.4.3 Retiring the Project.....		23
31	3.0 ENVIRONMENTAL ANALYSIS.....		25
32	3.1 GENERAL DESCRIPTION OF THE UPPER NORTH FORK		
33	FEATHER RIVER BASIN.....		25
34	3.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS.....		27
35	3.2.1 Geographic Scope.....		27
36	3.2.2 Temporal Scope.....		28
37	3.3 PROPOSED ACTION AND ACTION ALTERNATIVES.....		28

1	3.3.1	Water Resources .....	28
2	3.3.1.1	Affected Environment .....	28
3	3.3.1.2	Environmental Effects .....	65
4	3.3.1.3	Cumulative Effects on Water Resources.....	87
5	3.3.1.4	Unavoidable Adverse Effects. None. ....	88
6	3.3.2	Aquatic Resources .....	88
7	3.3.2.1	Affected Environment .....	88
8	3.3.2.2	Environmental Effects .....	98
9	3.3.2.3	Cumulative Effects on Aquatic Resources.....	133
10	3.3.2.4	Unavoidable Adverse Effects.....	135
11	3.3.3	Terrestrial Resources .....	135
12	3.3.3.1	Affected Environment .....	135
13	3.3.3.2	Environmental Effects.....	149
14	3.3.3.3	Unavoidable Adverse Effects.....	159
15	3.3.4	Threatened and Endangered Species .....	160
16	3.3.4.1	Affected Environment .....	160
17	3.3.4.2	Environmental Effects.....	165
18	3.3.4.3	Cumulative Effects on Bald Eagles.....	172
19	3.3.4.4	Unavoidable Adverse Effects.....	173
20	3.3.5	Recreational Resources .....	173
21	3.3.5.1	Affected Environment .....	173
22	3.3.5.2	Environmental Effects.....	190
23	3.3.5.3	Unavoidable Adverse Effects.....	225
24	3.3.6	Land Use and Aesthetic Resources.....	225
25	3.3.6.1	Affected Environment .....	225
26	3.3.6.2	Environmental Effects.....	241
27	3.3.6.3	Unavoidable Adverse Effects.....	250
28	3.3.7	Cultural Resources .....	250
29	3.3.7.1	Affected Environment .....	250
30	3.3.7.2	Environmental Effects.....	276
31	3.3.7.3	Unavoidable Adverse Effects.....	282
32	3.3.8	Socioeconomic Resources .....	282
33	3.3.8.1	Affected Environment .....	282
34	3.3.8.2	Environmental Effects.....	284
35	3.3.8.3	Unavoidable Adverse Effects.....	285
36	3.4	NO-ACTION ALTERNATIVE.....	285
37	3.5	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF	
38		RESOURCES.....	285
39	3.6	RELATIONSHIP BETWEEN SHORT-TERM USES AND	
40		LONG-TERM PRODUCTIVITY .....	286

1	4.0	DEVELOPMENTAL ANALYSIS .....	287
2	4.1	POWER AND ECONOMIC BENEFITS OF THE	
3		PROPOSED PROJECT .....	287
4	4.2	POWER AND ECONOMIC BENEFITS OF THE STAFF-	
5		RECOMMENDED ALTERNATIVE .....	287
6	4.3	POWER AND ECONOMIC BENEFITS OF THE NO-ACTION	
7		ALTERNATIVE .....	322
8	4.4	POWER AND ECONOMIC BENEFITS OF THE PROJECT	
9		RETIREMENT ALTERNATIVE.....	322
10	5.0	STAFF’S CONCLUSIONS .....	322
11	5.1	COMPARISON OF PROPOSED ACTION AND ALTERNATIVES....	322
12	5.2	COMPREHENSIVE DEVELOPMENT AND RECOMMENDED	
13		ALTERNATIVE.....	323
14	5.2.1	Recommended Alternative.....	324
15	5.2.1.1	Water Resource Measures.....	346
16	5.2.1.2	Aquatic Resource Measures.....	347
17	5.2.1.3	Recreation Resource Measures.....	349
18	5.2.2	Conclusion .....	352
19	5.3	CUMULATIVE EFFECTS SUMMARY.....	352
20	5.4	FISH AND WILDLIFE AGENCY RECOMMENDATIONS.....	354
21	5.5	CONSISTENCY WITH COMPREHENSIVE AND	
22		OTHER RESOURCE PLANS.....	364
23	5.6	RELATIONSHIP OF LICENSE PROCESS TO LAWS	
24		AND POLICIES .....	366
25	5.6.1	Water Quality Certification.....	366
26	5.6.2	Section 18 of the Federal Power Act - Authority to Require	
27		Fishways.....	366
28	5.6.3	Section 4(e) of the Federal Power Act.....	366
29	5.6.4	Endangered Species Act .....	367
30	5.6.5	National Historic Preservation Act.....	368
31	5.6.6	California Environmental Quality Act.....	369
32	6.0	LITERATURE CITED .....	371
33	7.0	LIST OF PREPARERS.....	382
34	8.0	LIST OF RECIPIENTS.....	383
35			
36		APPENDIX A UNFFR PROJECT—FINAL SETTLEMENT AGREEMENT.....	A-1
37		APPENDIX B UNFFR PROJECT—FOREST SERVICE PRELIMINARY 4(E)	
38		CONDITIONS .....	B-1