

Contents

	Page
Chapter 1 - Need for Proposed Action and Background	1
1.1 Introduction.....	1
1.1.1 Safety of Dams (SOD) Program Overview	1
1.1.2 SOD NEPA Compliance Requirements.....	2
1.2 Background.....	2
1.3 Purpose, Need, and Scope of Analysis	4
1.4 Authorizing Actions, Permits, and Licenses.....	5
Chapter 2 - Proposed Action and Alternatives	7
2.1 Introduction.....	7
2.2 No Action Alternative.....	7
2.3 Proposed Action Alternative.....	7
2.4 Alternatives Considered but Eliminated from Further Analysis.....	9
2.4.1 Downstream Toe Interceptor Trench/Toe Drain.....	9
2.4.2 South Drain Filter System.....	10
2.4.3 Upstream Partially Penetrating Soil-Bentonite Cutoff Wall/Interceptor Trench - Toe Drain/South Drain Filter Alternative	10
2.4.4 Fully Penetrating, Sheet Pile Cutoff Wall Alternative.....	11
Chapter 3 - Affected Environment and Environmental Effects.....	13
3.1 Introduction.....	13
3.2 Affected Environment.....	13
3.2.1 Recreation	13
3.2.2 Water Rights	13
3.2.3 Water Resources	15
3.2.4 Water Quality.....	16
3.2.5 System Operations	18
3.2.6 Public Safety, Access, and Transportation	19
3.2.7 Visual Resources.....	19
3.2.8 Socioeconomics	20
3.2.9 Cultural Resources	21
3.2.9.1 Cultural History	21
3.2.9.2 Cultural Resources Status	23
3.2.10 Paleontological Resources	24
3.2.11 Wetlands and Vegetation	24
3.2.12 Wildlife Resources.....	28
3.2.13 Threatened, Endangered, Candidate, Protected, and Sensitive Species	33
3.3 Environmental Effects of Alternatives.....	34
3.3.1 Recreation	35
3.3.1.1 No Action Alternative.....	35
3.3.1.2 Proposed Action Alternative.....	35
3.3.2 Water Rights	35
3.3.2.1 No Action Alternative.....	35

3.3.2.2	Proposed Action Alternative.....	35
3.3.3	Water Resources	36
3.3.3.1	No Action Alternative.....	36
3.3.3.2	Proposed Action Alternative.....	36
3.3.4	Water Quality.....	36
3.3.4.1	No Action Alternative.....	36
3.3.4.2	Proposed Action Alternative.....	36
3.3.5	System Operations	36
3.3.5.1	No Action Alternative.....	36
3.3.5.2	Proposed Action Alternative.....	36
3.3.6	Public Safety, Access, and Transportation	36
3.3.6.1	No Action Alternative.....	36
3.3.6.2	Proposed Action Alternative.....	37
3.3.7	Visual Resources.....	37
3.3.7.1	No Action Alternative.....	37
3.3.7.2	Proposed Action Alternative.....	37
3.3.8	Socioeconomics	37
3.3.8.1	No Action Alternative.....	37
3.3.8.2	Proposed Action Alternative.....	37
3.3.9	Cultural Resources	38
3.3.9.1	No Action Alternative.....	38
3.3.9.2	Proposed Action Alternative.....	38
3.3.10	Paleontological Resources	38
3.3.10.1	No Action Alternative.....	38
3.3.10.2	Proposed Action Alternative.....	39
3.3.11	Wetlands and Vegetation	39
3.3.11.1	No Action Alternative.....	39
3.3.11.2	Proposed Action Alternative.....	39
3.3.12	Wildlife Resources.....	39
3.3.12.1	No Action Alternative.....	39
3.3.12.2	Proposed Action Alternative.....	40
3.3.13	Threatened, Endangered, Candidate, Protected, and Sensitive Species	41
3.3.13.1	No Action Alternative.....	41
3.3.13.2	Proposed Action Alternative.....	41
3.4	Summary of Environmental Effects.....	42
3.5	Cumulative Effects.....	42
3.6	Indian Trust Assets	43
3.7	Environmental Justice.....	43
	Chapter 4 - Environmental Commitments.....	45
	Chapter 5 - Consultation and Coordination.....	49
5.1	Introduction.....	49
5.2	Public Involvement	49
5.3	Native American Consultation.....	49
5.4	Coordination with Other Agencies	50
	Chapter 6 - Preparers.....	51

Chapter 7 - References	53
Appendix 1 - Maps	59
Appendix 1 - Map 1	61
Appendix 1 - Map 2	62
Appendix 1 - Map 3	63
Appendix 1 - Map 4	64