

MIDDLE FORK AMERICAN RIVER PROJECT (FERC Project No. 2079)

VOLUME 1 – INITIAL STATEMENT, EXHIBITS A, B, C, D, G, AND H (PUBLIC INFORMATION)

CD No. 1 of 11 CDs

Initial Statement

- Exhibit A: Description of the Project
- Exhibit B: Project Operation and Resource Utilization
- Exhibit C: Construction History
- Exhibit D: Statement of Costs and Financing
- Exhibit G: Project Maps
- Exhibit H: General Information

VOLUME 2 – EXHIBIT F (CRITICAL ENERGY INFRASTRUCTURE INFORMATION [CEII])

CD No. 2 of 11 CDs

- Exhibit F: Design Drawings

VOLUME 3 – EXHIBIT E SECTIONS 1 THROUGH 16 AND APPENDICES (BOOKS 1, 2, AND 3 OF 12 BOOKS) (PUBLIC INFORMATION)

CD No. 3 of 11 CDs

Exhibit E

INTRODUCTION

- 1.0 APPLICATION
- 2.0 PURPOSE OF ACTION AND NEED FOR POWER
- 3.0 NO-ACTION ALTERNATIVE
- 4.0 PROPOSED ACTION
- 5.0 OTHER ALTERNATIVES
- 6.0 STATUTORY AND REGULATORY REQUIREMENTS
- 7.0 AFFECTED ENVIRONMENT
 - 7.1 General Description of the River Basin
 - 7.2 Geology and Soils
 - 7.3 Water Use
 - 7.4 Water Quality
 - 7.5 Fish and Aquatic Resources
 - 7.6 Botanical and Wildlife Resources
 - 7.7 Geomorphology
 - 7.8 Riparian Resources
 - 7.9 Recreation Resources
 - 7.10 Land Use
 - 7.11 Aesthetic Resources
 - 7.12 Cultural Resources
 - 7.13 Tribal Resources
 - 7.14 Socioeconomic Conditions
 - 7.15 Air Quality

VOLUME 3 – EXHIBIT E SECTIONS 1 THROUGH 16 AND APPENDICES (CONTINUED)
(BOOKS 1, 2 AND 3 OF 12 BOOKS) (CONTINUED)
(PUBLIC INFORMATION)

CD No. 3 OF 11 CDs (CONTINUED)

Exhibit E (continued)

- 8.0 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION
 - 8.1 Analytical Approach
 - 8.2 Geology and Soils
 - 8.3 Water Use
 - 8.4 Water Quality
 - 8.5 Fish and Aquatic Resources
 - 8.6 Botanical and Wildlife Resources
 - 8.7 Geomorphology
 - 8.8 Riparian Resources
 - 8.9 Recreation Resources
 - 8.10 Land Use
 - 8.11 Aesthetic Resources
 - 8.12 Cultural Resources
 - 8.13 Tribal Resources
 - 8.14 Socioeconomic Conditions
 - 8.15 Air Quality
- 9.0 CUMULATIVE EFFECTS ANALYSIS
- 10.0 ENVIRONMENTAL ANALYSIS OF OTHER ALTERNATIVES
- 11.0 ECONOMIC ANALYSIS
- 12.0 CONCLUSIONS AND RECOMMENDATIONS
- 13.0 FINDING OF NO SIGNIFICANT IMPACT
- 14.0 CONSULTATION DOCUMENTATION
- 15.0 LIST OF PREPARERS
- 16.0 LITERATURE CITED

Appendices

- Appendix A. Section 4.0, Proposed Action
 - Modified or New Facility Construction Activities and Concept Designs
- Appendix B. Section 7.0, Affected Environment
 - B1a. Monthly Impaired and Unimpaired Flow by Water Year Type and Water Year at Gaging Stations and Modeled Hydrologic Nodes under Impaired and Unimpaired Conditions
 - B1b. Annual Peak Flow at Gages in the Middle Fork American River Project
 - B1c. Graphs of Average Daily Flow (1975–2007) for Selected Locations in the Waters Associated with the Middle Fork American River Project
 - B1d. Hourly Flows Measured at the Middle Fork American River near Foresthill Gage (USGS Gage No. 11433300)
 - B1e. Example Hydrographs Showing Impaired and Unimpaired Flows at the Top and Bottom of the Bypass and Peaking Reaches

VOLUME 3 – EXHIBIT E SECTIONS 1 THROUGH 16 AND APPENDICES (CONTINUED)
(BOOKS 1, 2 AND 3 OF 12 BOOKS) (CONTINUED)
(PUBLIC INFORMATION)

CD No. 3 of 11 CDs (CONTINUED)

Exhibit E (continued)

Appendices (continued)

- Appendix B. Section 7.0, Affected Environment (continued)
 - B2. Habitat Area versus Flow Relationships and Effective Habitat Analyses
 - B3. Overview of the USDA-FS Visual Management System
- Appendix C. Section 8.0, Environmental Analysis of the Proposed Action
 - C1. Operations Model Description Summary
 - C2a. Wetted Perimeter Time Series Analysis
 - C2b. Habitat Time Series Relationships
 - C2c. Reservoir Water Surface Elevation Plots
 - C3. Construction Air Quality Emission Model
- Appendix D. Response to Comments on Draft License Application

VOLUME 3 – EXHIBIT E SUPPORTING DOCUMENT A (SD A)
(BOOK 4 OF 12 BOOKS)
(PUBLIC INFORMATION)

CD No. 4 of 11 CDs

SD A Proposed Environmental Measures

INTRODUCTION

AQUATIC RESOURCES – MANAGEMENT AND MONITORING PLANS

- Flow and Reservoir Monitoring Plan
- Fish Population Monitoring Plan
- Foothill Yellow-Legged Frog Monitoring Plan
- Geomorphology/Riparian Monitoring Plan
- Sediment Management Plan
- Water Temperature Monitoring Plan
- Western Pond Turtle Monitoring Plan
- Water Quality Monitoring Plan
- Bioaccumulation Monitoring Plan
- Benthic Macroinvertebrate Monitoring Plan

AQUATIC RESOURCES – MEASURES

- Instream Flow and Reservoir Minimum Pool Measure

LAND MANAGEMENT – MANAGEMENT PLANS

- Transportation System Management Plan
- Fire Prevention and Suppression Plan

RECREATION RESOURCES – MANAGEMENT PLANS

- Recreation Plan
- Visual Resource Management Plan

TERRESTRIAL RESOURCES – MANAGEMENT PLANS

- Vegetation and Integrated Pest Management Plan
- Bald Eagle Management Plan

VOLUME 3 – EXHIBIT E SUPPORTING DOCUMENT B (SD B)
(BOOKS 5, 6, AND 7 OF 12 BOOKS)
(PUBLIC INFORMATION)

CD No. 5 of 11 CDs

SD B Final Technical Study Reports

INTRODUCTION

AQUATIC RESOURCES

- AQ 1: Instream Flow (2010)
- AQ 2: Fish Population (2007–2009)
- AQ 3: Macroinvertebrate and Aquatic Mollusk (2007)
- AQ 3: Aquatic Mollusk (2008)
- AQ 4: Water Temperature Modeling (2010)
- AQ 5: Bioenergetics (2011)
- AQ 6: Fish Passage (2008)
- AQ 7: Entrainment Contingency Study (2011)
- AQ 8: Reservoir Fish Habitat (2011)
- AQ 9: Geomorphology (2008)
- AQ 9: Geomorphology (2010)
- AQ 10: Riparian Resources (2010)
- AQ 11: Water Quality (2007)
- AQ 11: Contingency Water Quality: Methylmercury Fish Tissue Sampling (2007–2009)
- AQ 12: Special-Status Amphibian and Aquatic Reptile (2007)
- AQ 12: Special-Status Amphibian and Aquatic Reptile Supplemental Report: California Red-Legged Frog Protocol-Level Survey Report (2010)

VOLUME 3 – EXHIBIT E SUPPORTING DOCUMENT B (SD B)
(BOOK 8 OF 12 BOOKS)
(PUBLIC INFORMATION)

CD No. 6 of 11 CDs

SD B Final Technical Study Reports (continued)

CULTURAL RESOURCES

- CUL 1: Cultural Resources (2007)
- CUL 1: Cultural Resources (2008)

LAND MANAGEMENT

- LAND 1: Transportation System (2008)
- LAND 2: Fire Prevention and Response (2008)
- LAND 3: Emergency Action and Public Safety (2010)
- LAND 4: FERC Project Boundary and Authorization (2008)

VOLUME 3 – EXHIBIT E SUPPORTING DOCUMENT B (SD B)
(BOOKS 9 AND 10 OF 12 BOOKS)
(PUBLIC INFORMATION)

CD No. 7 of 11 CDs

SD B Final Technical Study Reports (continued)

RECREATION RESOURCES

- REC 1: Recreation Use and Facilities (2010)
- REC 2: Recreation Visitor Surveys (2010)
- REC 3: Reservoir Recreation Opportunities (2010)
- REC 4: Stream-based Recreation Opportunities (2010)
- REC 4: Contingency Whitewater Boating Study (2010)
- REC 5: Visual Quality Assessment (2008)

VOLUME 3 – EXHIBIT E SUPPORTING DOCUMENT B (SD B)
(BOOK 11 OF 12 BOOKS)
(PUBLIC INFORMATION)

CD No. 8 of 11 CDs

SD B Final Technical Study Reports (continued)

TERRESTRIAL RESOURCES

- TERR 1: Vegetation Communities and Wildlife Habitat (2007)
- TERR 2: Special-Status Plants (2008)
- TERR 3: Noxious Weed (2008)
- TERR 4: Special-Status Wildlife (2008)
- TERR 5: Bald Eagle (2008)
- TERR 6: Special-Status Bats (2007)

VOLUME 3 – EXHIBIT E SUPPORTING DOCUMENT C (SD C)
(BOOK 12 OF 12 BOOKS)
(PUBLIC INFORMATION)

CD No. 9 of 11 CDs

SD C Draft Biological Assessment/Biological Evaluation (BA/BE)

VOLUME 4 – EXHIBIT E AND SUPPORTING DOCUMENTS (SD A, SD B AND SD C)
(CONFIDENTIAL INFORMATION)

CD No. 10 of 11 CDs

Exhibit E

- 7.0 AFFECTED ENVIRONMENT
 - 7.6 Botanical and Wildlife Resources (Maps)

SD A Proposed Environmental Measures

TERRESTRIAL RESOURCES – MANAGEMENT PLANS

- Vegetation and Integrated Pest Management Plan (Maps)
- Bald Eagle Management Plan (Map)

SD B Final Technical Study Reports

AQUATIC RESOURCES

- AQ 12: Special-Status Amphibian and Aquatic Reptile (2007) (Map)

TERRESTRIAL RESOURCES

- TERR 2: Special-Status Plants (2008) (Maps)
- TERR 5: Bald Eagle (2008) (Map and Appendices)

SD C Draft Biological Assessment/Biological Evaluation (BA/BE)

Maps

VOLUME 5 – EXHIBIT E SUPPORTING DOCUMENTS (SD D AND SD E)
(PRIVILEGED INFORMATION)

CD No. 11 of 11 CDs

SD D Final Technical Study Reports (Privileged)

CULTURAL RESOURCES

- CUL 1: Cultural Resources (2007)
- CUL 1: Cultural Resources (2008)
- CUL 1: Cultural Resources National Register of Historic Places Eligibility Report (2010)

SD E Draft Historic Properties Management Plan (HPMP)