

Table of Contents

EXECUTIVE SUMMARY	ES-1
Introduction	ES-1
Background	ES-2
Project Description.....	ES-3
Approach to Environmental Analysis	ES-5
Impacts and Mitigation Measures	ES-6
Cumulative and Growth Inducing Impacts.....	ES-6
Alternatives to the Project	ES-7
Opportunities for Public Comment.....	ES-11
Draft Mitigation Monitoring and Reporting Program.....	ES-11
1. INTRODUCTION	1-1
1.1. Introduction and Purpose of the EIR.....	1-1
1.2. Project Overview	1-2
1.3. CPUC CPCN Application Process	1-7
1.4. EIR Process	1-8
1.5. Key Areas of Environmental Concern.....	1-10
1.6. Areas of Controversy.....	1-10
1.7. Organization of the EIR.....	1-11
2. PROJECT DESCRIPTION.....	2-1
2.1. Introduction.....	2-1
2.2. Project Purpose and Need	2-2
2.3. Existing Facilities.....	2-3
2.4. Project Description and Ownership.....	2-6
2.5. Project Land Requirements	2-24
2.6. Construction Staging and Access	2-26
2.7. Construction Schedule	2-27
2.8. Construction Work Force.....	2-29
2.9. Construction Methods.....	2-29
2.10. Operation and Maintenance Plans.....	2-34
2.11. Future Plans.....	2-40

TABLE OF CONTENTS

2.12. Regulatory Requirements..... 2-41

2.13. Permit Requirements..... 2-44

3. ENVIRONMENTAL IMPACT ANALYSES..... 3-1

3.1. Aesthetics..... 3.1-1

3.2. Agriculture 3-2-1

3.3. Air Quality..... 3.3-1

3.4. Biological Resources 3.4-1

3.5. Cultural Resources..... 3.5-1

3.6. Geology, Soils and Mineral Resources..... 3.6-1

3.7. Hazards and Hazardous Materials..... 3.7-1

3.8. Hydrology 3.8-1

3.9. Land Use and Planning..... 3.9-1

3.10. Noise..... 3.10-1

3.11. Population and Housing..... 3.11-1

3.12. Public Services and Socioeconomics..... 3.12-1

3.13. Recreation 3.13-1

3.14. Transportation and Traffic 3.14-1

3.15. Utilities 3.15-1

4. CUMULATIVE AND GROWTH-INDUCING EFFECTS 4-1

4.1 Introduction 4-1

4.2 Related Projects 4-1

4.3 Cumulative Impacts 4-4

4.4 Growth Inducing Impacts 4-8

5. ALTERNATIVES TO THE PROJECT 5-1

5.1 Introduction 5-1

5.2 Alternative Route Selection Process 5-1

5.3 Routing Criteria for Evaluating Line 400/401 Connection
Pipeline Routes..... 5-16

5.4 Potential Impacts Associated with Alternative Line 400/401
Connection Pipeline Routes 5-19

5.5 Summary Of Impacts Associated With The Alternatives 5-23

6. MITIGATION MONITORING AND REPORTING PROGRAM..... 6-1

6.1 Introduction 6-1

6.2 Roles and Responsibilities 6-1

6.3 Environmental Sectors and Mitigation..... 6-29

7. LIST OF PREPARERS AND AGENCIES CONSULTED..... 7-1

7.1 Report Authors 7-1

7.2 Persons/Agencies Consulted..... 7-3

7.3 Public Involvement Process 7-6

8. REFERENCES..... 8-1

9. ACRONYMS AND ABBREVIATIONS 9-1

10. GLOSSARY10-1

List of Tables

Table ES-1: WGSII Maximum Storage, Injection, and Withdrawal Limits..... ES-3

Table ES-2: Summary of Impacts ES-11

Table 1.2-1: WGSII Maximum Storage, Injection, and Withdrawal Limits..... 1-2

Table 2.4-1: WGSII Permitted Maximum Storage, Injection, and Withdrawal Limits..... 2-7

Table 2.5-1: Surface Disturbance (acres¹) 2-24

Table 2.13-1: Permit Requirements..... 2-45

Table 3.2-1: Project Land Requirements (acres¹)..... 3.2-9

Table 3.3-1: Project Area Air Quality Monitoring Summary-City of Colusa, Colusa County (Days Exceeding Standards*) 3.3-3

Table 3.3-2: Project Area Air Quality Monitoring Summary-Chico (Butte County) (Days Exceeding Standards*)..... 3.3-3

Table 3.3-3: Project Area Air Quality Monitoring Summary-Willows (Glenn County) (Days Exceeding Standards*)..... 3.3-4

Table 3.3-4: Project Area Air Quality Monitoring Summary-Yuba (Sutter County) (Days Exceeding Standards*)..... 3.3-5

Table 3.3-5: Federal and California Ambient Air Quality Standards 3.3-8

Table 3.3-6: Maximum Daily Construction Emissions (Pounds per day)- Pipeline Construction..... 3.3-13

Table 3.3-7: Maximum Daily Construction Emissions (Pounds per day)- Delevan Interconnect Facility 3.3-13

Table 3.3-8: Maximum Daily Construction Emissions (Pounds per day)- Well Pad Site 3.3-14

Table 3.3-9: Maximum Daily Construction Emissions (Pounds per day)-Remote Facility Site (Mechanical)..... 3.3-14

Table 3.3-10: Maximum Daily Construction Emissions (Pounds per day)- Remote Facility Site (Electrical/Instrumentation)..... 3.3-15

Table 3.3-11: Total Maximum Daily Construction Emission Results..... 3.3-15

TABLE OF CONTENTS

Table 3.4-1: Special Status Plant Species with Potential to Occur in the Project Area 3.4-9

Table 3.4-2: Special Status Animal Species with Potential to Occur in the Project Area 3.4-11

Table 3.4-3: Habitat and Wetlands Impacts Associated with Components of the Wild Goose Gas Storage Project 3.4-25

Table 3.4-4: Potential Direct and Indirect Effects on Special-Status Wildlife Species 3.4-36

Table 3.6-1: Earthquakes Greater Than Magnitude 5.0 Within 100 Kilometers (62 Miles) of the Project Area (Intersection of the Pipeline and the Sacramento River)..... 3.6-6

Table 3.6-2: Length in Miles Along Line 400/401 Connection Pipeline and Percent Area for Facilities 3.6-12

Table 3.6-3: Distance from Significant Faults (Km)..... 3.6-14

Table 3.7-1: Relative Risk from an Unplanned Natural Gas Release..... 3.7-21

Table 3.7-2: Sensitive Receptors Located Near Storage Field Facilities..... 3.7-23

Table 3.8-1: Summary of DWR Monitoring Groundwater Well Data..... 3.8-11

Table 3.8-2: Water Depths at Boring Locations..... 3.8-13

Table 3.8-3: Summary of DWR Surface Water Quality Measurements 3.8-14

Table 3.9-1: Butte County Existing General Plan Goal and Policy Evaluation..... 3.9-20

Table 3.9-2: Colusa County Existing General Plan Goal and Policy Evaluation..... 3.9-23

Table 3.10-1: Typical Residential/Commercial Noise Sources and Levels 3.10-2

Table 3.10-2: Community Noise Exposure 3.10-5

Table 3.10-3: Noise Attenuation from the Remote Facility Site 3.10-11

Table 3.10-4: Estimated Peak Pipeline Construction Noise Emissions 3.10-14

Table 3.11-1: Socioeconomic Characteristics of Butte and Colusa Counties 3.11-2

Table 3.11-2: Communities Within Commuting Distance (70 Miles) of Project Construction..... 3.11-5

Table 3.11-3: Recreational Areas and Camping Facilities in the Project Study Area..... 3.11-5

Table 3.12-1: Labor and Employment in the Project Area 3.12-3

Table 3.12-2: Major Construction Phases and Workforce..... 3.12-5

Table 3.14-1: Roadway and Intersection Criteria 3.14-2

Table 5.3-1: Comparison of Approximate Acreage Impacts for the Proposed Alignment and the South Crossing Alternative Line 400 Connection Pipeline Routes..... 5-18

Table 5.4-1: Number of Residences and Relative Risk from an Unplanned Natural Gas Release for Each Line 400/401 Pipeline Alternative 5-22

Table 6.3-1 Draft Mitigation, Monitoring, and Reporting Program.....6-2

List of Figures

Figure ES-1: Project Vicinity ES-2

Figure ES-2: Alternative Pipeline Routes ES-9

Figure 1.1-1: Pipeline Route..... 1-3

Figure 1.2-1: Remote Facility Site 1-5

Figure 2.3-1: Underground Rock Zones..... 2-4

Figure 2.3-2: Gas Flow Schematic From RFS To Well Pad 2-5

Figure 2.4-1: Project Location..... 2-7

Figure 2.4-2: Well Pad Site Expansion 2-9

Figure 2.4-3 a-e: Proposed Line 400/401 Connection Pipeline Route..... 2-11

Figure 2.4-4: RFS Expansion and On-Site Facilities 2-22

Figure 2.7-7: Construction Schedule..... 2-28

Figure 3.1-1: Well Pad Site Visual Setting.....3.1-2

Figure 3.1-2: Storage Loop Pipeline Visual Setting..... 3.1-3

Figure 3.1-3: Remote Facility Site Visual Setting with Adjacent Rice Fields..... 3.1-4

Figure 3.1-4: Colusa County Local Scenic Highways 3.1-7

Figure 3.1-5: Permanent Pipeline Markers 3.1-15

Figure 3.2-1a: Williamson Act Properties Within the Project Vicinity–
Butte County 3.2-4

Figure 3.2-1b: Williamson Act Properties Within the Project Vicinity–
Colusa County 3.2-5

Figure 3.4-1: Vernal Pool and Swale Habitats..... 3.4-5

Figure 3.4-2 a, b: Well Pad Expansion Area..... 3.4-26

Figure 3.4-2 c,d: Giant Garter Snake Habitat Enhancement Site 3.4-30

Figure 3.4-3: Giant Garter Snake Habitat Enhancement Site Map 3.4-38

Figure 3.4-4: Existing Habitat..... 3.4-40

Figure 3.4-5: Converted Habitat 3.4-41

Figure 3.6-1: Regional Fault Map 3.6-2

Figure 3.6-2: Earthquake Center Map..... 3.6-5

Figure 3.6-3: Natural Gas Fields 3.6-7

Figure 3.6-4: Geologic Map..... 3.6-9

Figure 3.7-1: Wild Goose Reservoir and Wells 3.7-3

TABLE OF CONTENTS

Figure 3.8-1: Flood Zones 3.8-9
Figure 3.9-1 a-e: Existing Land Uses in the Project Area 3.9-3
Figure 3.14-1: Construction Access to the Well Pad Site and Remote Facility Site..... 3.14-9
Figure 5-1 a-e: Alternative Line 400/401 Connection Pipeline Routes 5-5

Appendices

Appendix A: Scoping Memo
Appendix B: Notice of Preparation (NOP)
Appendix C: NOP Agency Mailing List
Appendix D: Agency Comment Letters to NOP
Appendix E: Announcement for Public Meetings
Appendix F: Giant Garter Snake Habitat Enhancement Plan
Appendix G: Indirect Source Review Guidelines - Butte County
Appendix H: Biological Assessment
Appendix I: Geology Additional Support Information
Appendix J: Hazardous Materials Release Response Plan (HMRRP)
Appendix K: Supporting Technical Analysis for Hazards Evaluation
Appendix L: Distance of Sensitive Receptors to Project Components
Appendix M: General Information for Water Wells in Project Vicinity
Appendix N: Noise Survey
Appendix O: Landowner Mailer
Appendix P: Agency Cover Letter
Appendix Q: Scoping Meeting Summary Report
Appendix R: APEX Petroleum Engineering Report