

EXECUTIVE SUMMARY

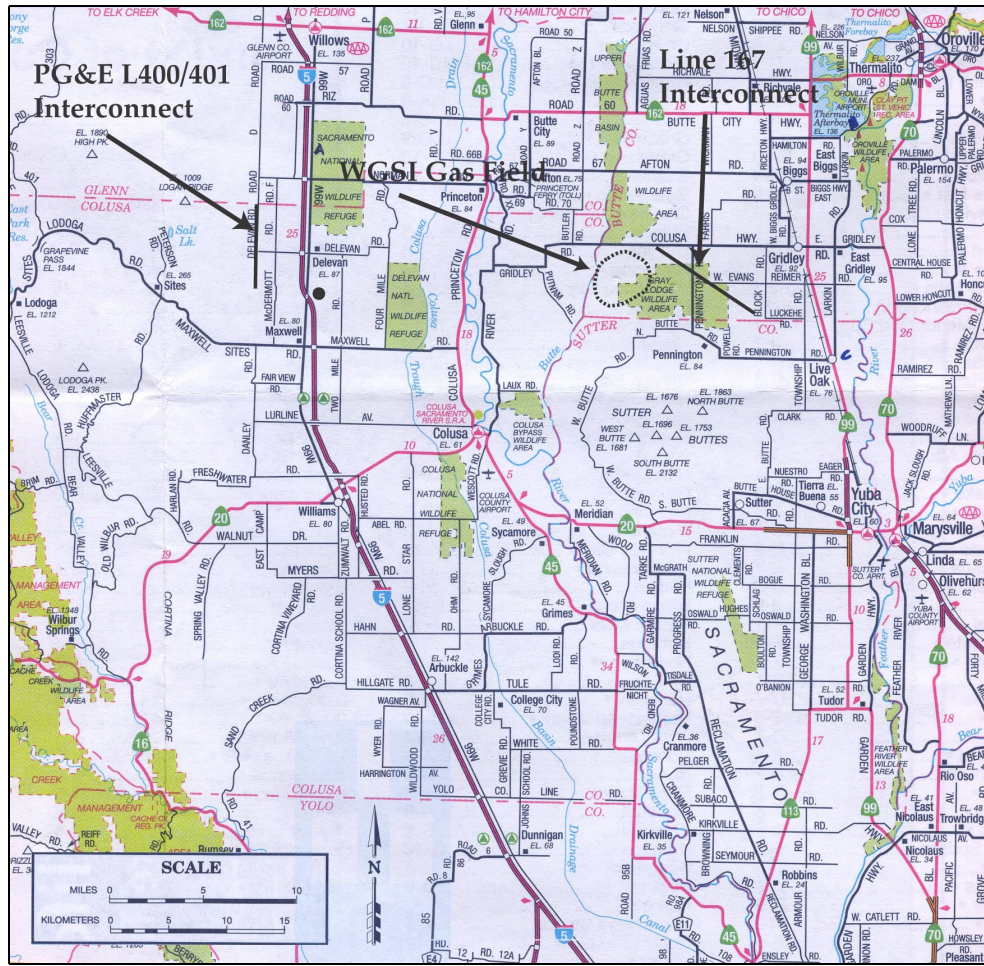
Introduction

Wild Goose Storage, Inc. (WGS) filed an application (Application 01-06-029) with the California Public Utilities Commission (CPUC) on June 18, 2001, for an amended Certificate of Public Convenience and Necessity (CPCN). The application requests authorization to expand the permitted storage and operational capacity of the existing Wild Goose Gas Storage Field located in Butte County, California. The application also seeks approval to construct a 25.6-mile pipeline from the WGS Remote Facility Site (RFS) to the Pacific Gas and Electric Company (PG&E) Line 400/401 transmission pipeline in Colusa County (see Figure ES-1).

For the purposes of evaluating the project under the California Environmental Quality Act (CEQA) and Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines), the “proposed project” as identified in this Draft EIR is the project formally presented in WGS’s application and PEA, as modified. As required by CEQA, this Draft EIR examines the expected individual and cumulative impacts of the proposed project. This Draft EIR also identifies means to minimize potential adverse impacts (mitigation measures) and presents an evaluation of reasonable alternatives to the proposed project, including the No Project Alternative. The CPUC has principal responsibility for approving or denying the CPCN and therefore is the lead agency in preparing this Draft EIR.

The CPUC has prepared this EIR to provide the public and responsible agencies reviewing this project with information about the potential effects on the local and regional environment. This Draft EIR was prepared in compliance with CEQA and the CEQA Guidelines.

Figure ES-1: Project Vicinity



SOURCE: MHA 2002

CEQA and the CEQA Guidelines define the proposed project as a project subject to environmental review. This EIR presents the CPUC’s analysis and findings of the potential environmental effects of the proposed project. Government agencies, interested organizations, and members of the public are invited to submit written comments on this Draft EIR. After the 45-day comment period ends, the CPUC will review and respond to the comments, conduct additional environmental analysis and revise the Draft EIR if needed, and prepare a Final EIR. The Commission will make its decision on the WGS application based upon the entire body of evidence gathered for the proceeding, including the EIR and all public comments.

Background

The CPUC initially granted WGS a CPCN on June 25, 1997, to develop, construct, and operate an underground natural gas storage facility in Butte County, California and to provide firm and interruptible storage services at market-based rates. That approval entitled WGS to:

- Construct and operate (including the injection and withdrawal of natural gas) a new Well Pad atop the depleted Wild Goose Gas Field
- Construct a bi-directional pipeline (Loop Pipeline) from the Well Pad to a new remote operating facility
- Construct a remote operating facility (Remote Facility Site) where all operations of the storage field would be managed and monitored (see Figure 1.2-1)

Initial development and construction of the WGSi project was completed in April 1999. The CPUC's initial approval of the WGSi project authorized the use of one of the Wild Goose Gas Field's twelve gas storage zones (L4). Zone L4 is authorized for the maximum storage of 14 billion cubic feet (bcf) of natural gas. The Commission's approval also limited the daily injection and withdrawal of gas into and from the Field to 80 million cubic feet per day (Mmcf/d) and 200 Mmcf/d, respectively.

Project Description

The proposed project would expand WGSi's permitted storage capacity from 14 to 29 bcf, with daily injection/withdrawal rates of 450 Mmcf/d and 700 Mmcf/d respectively (see Table ES-1).

Table ES-1: WGSi Maximum Storage, Injection, and Withdrawal Limits

	Existing	Proposed
Storage	14 bcf	29 bcf
Injection	80 Mmcf/d	450 Mmcf/d
Withdrawal	200 Mmcf/d	700 Mmcf/d

SOURCE: WGSi 2001

Four project components have been proposed to expand storage capacity and increase injection/withdrawal rates:

- Expansion of the existing Well Pad Site
- Construction of a second Storage Loop Pipeline
- Expansion of the Remote Facility Site
- Construction of the Line 400/401 Connection Pipeline and Delevan Interconnect Facility

Well Pad Site

WGSi proposed expansion of the existing well pad site to provide for the added storage and injection/withdrawal capacity. Expansion of the Well Pad was designed to accommodate the drilling of up to 16 new wells. The new wells would be used for injection/withdrawal and observation, and would be drilled into the Wild Goose reservoir Zones L1, U1, and U2. The Well Pad expansion would displace approximately 1.4 acres of

wetland, and would require up to 26,000 cubic yards of structural fill material and 1,000 cubic yards of soil for elevation of the Well Pad site and construction of a perimeter berm.

Storage Loop Pipeline

WGSI has proposed construction of a second 18-inch diameter bi-directional Loop Pipeline to convey the additional gas volumes between the reservoir and the Remote Facility Site. A fiber optic cable would be installed with this pipeline. The Pipeline and cable would be installed in the same right-of-way as the existing Loop Pipeline.

Remote Facility Site

The added capacity of the Wild Goose reservoir would require expansion of the Remote Facility Site. The site now serves as the operational base for the WGSI facilities and includes the equipment required to receive gas from the PG&E transmission system, to inject and withdraw gas from the reservoir, and to prepare it for reintroduction into the PG&E system. The project would add three additional natural gas-fueled engines with three additional compressors. These new engines would produce a total of up to 14,400 horsepower.

Expansion of the Remote Facility Site would include:

- Expansion of the lease area by 5.8 acres to a total of 11.9 acres
- Three additional natural gas-fueled engines and compressors producing up to 14,400 horsepower
- Up to 6 additional produced-water storage tanks with a total capacity of 200,000 gallons
- Dehydration units and reboilers
- Natural gas coolers
- A relief vent for pressure relief from the compressor station piping
- A new 1,000-gallon glycol supply/drain tank
- A standby generator

Line 400/401 Connection Pipeline and Delevan Interconnect Facility

Gas would be conveyed to and from the WGSI facilities from PG&E's Line 400/401 gas transmission pipeline, which runs in a north-south direction along the west side of the upper Sacramento Valley. The proposed Pipeline, which would be up to 36-inches in diameter, would connect the Remote Facility Site to the PG&E Line 400/401 Pipeline at the Delevan Compressor Station. Two fiber optic communication cables, one primary and one back-up, would be installed in the Pipeline trench to allow remote operation of valves and data acquisition by the project applicant.

A new interconnect facility with valves, metering, and pressure monitoring equipment would be constructed adjacent to PG&E's Delevan Compressor Station. The Delevan Interconnect Facility would consist of a graveled lot with a small pre-engineered metal building that would house the site's instrumentation electronics and monitoring equipment.

Approach to Environmental Review

The CPUC is conducting its review of the potential environmental impacts that could result from implementation of the project. The review is being conducted in accordance with CEQA and the CEQA Guidelines and CPUC CEQA Rules 17.1 All government agencies in California are required to consider whether their decisions would result in significant impacts on the environment and, if so, to take actions to eliminate, avoid, compensate for, or reduce those impacts to a less than significant level.

In conducting the environmental review, the CPUC first examined and verified information provided by WGSi in the Application and PEA concerning the potential environmental impacts of the proposed project, including air quality, water quality, noise, public health and safety, utilities and services, geology and mineral resources, aesthetics, and biological resources. The CPUC then consulted with government agencies that have permitting or statutory authority over all or part of the project or who have specialized knowledge of the project area. The CPUC also consulted with the public about the scope of the issues the EIR should cover. The CPUC conducted additional studies and analyses as needed to identify any potentially significant impacts and identifies measures, called mitigation measures, that would avoid, eliminate, compensate for, or reduce any such impacts to a less than significant level.

In reading this EIR, it is important to understand the assumption used throughout the document to evaluate the potential environmental impacts of the project. Each environmental issue in this EIR is analyzed based on significance criteria established in the CEQA Guidelines. When no specific guidelines are suggested by the CEQA Guidelines, professional judgment was used to develop appropriate significance thresholds. The significance criteria are defined at the beginning of each impact analysis section, following the discussion of the environmental and regulatory setting. Potential impacts are categorized as follows: significant and unavoidable; significant, but mitigatable to a less than significant level; or less than significant.

Feasible mitigation measures are identified in this EIR for impacts that could be considered potentially significant. The measures are designed to reduce the impact to a less than significant level. In many cases, WGSi proposed design features or mitigation measures as part of the project that would reduce impacts. For other potential impacts, the CPUC has identified additional mitigation measures in addition to those proposed by WGSi.

The CPUC reviewed and considered all of the relevant permit requirements and approvals, which are listed in "Permit Requirements in Section 2. This EIR is based on the assumption that WGSi would operate its facilities within the parameters of the required permits (e.g. water discharge permits and air emission permits). Operations in excess of permitted levels (i.e., if WGSi added compression capability in the future) would require new discretionary permits and additional environmental review. For many design, construction, and operation issues, the permit review processes of responsible federal, state, and local regulatory agencies require that WGSi implement measures to ensure proper implementation of the project. For example, the US Department of Transportation (DOT), Office of Pipeline Safety is responsible for ensuring that the design of the pipelines meets stringent standards adopted by the federal government to protect public health and safety. Because the DOT Office of Pipeline Safety has a major role in reviewing and

approving the safety of the proposed pipeline, and state and federal laws require WGSi to obtain design approval from this agency, this EIR assumes that these standards will be implemented.

This EIR includes an analysis of the environmental effects of feasible project alternatives. Because most aspects of the proposed project are geographically "fixed" the alternatives analysis focused on alternative alignments for the Line 400/401 Connection Pipeline. In their filing with the CPUC the Applicant identified a number of Line 400/401 Connection Pipeline alignments. One of those alternative alignments was selected for evaluation in this EIR. A second Line 400/401 Connection Pipeline alternative alignment was developed in response to comments made during a public scoping meeting for the project. That alternative alignment follows existing roadways and roadway rights-of-ways to the extent possible.

This EIR also includes evaluation of a minor project variation, which would re-direct expansion of the Remote Facility Site to the east, rather than to the west, of the existing Facility.

The WGSi mitigation included as part of the project and the CPUC mitigation is described in Section 6.0, "Draft MMRP."

The CPUC is seeking comments on this EIR. The CPUC will respond to comments on the EIR, conduct additional analysis as necessary, and modify mitigation measures as appropriate. If the CPUC approves the project, CPUC staff would closely monitor WGSi's compliance with the requirements imposed by the mitigation measures.

Impacts and Mitigation Measures

The CPUC concluded that the project has the potential to result in significant environmental impacts. Table ES-2, located at the end of the Executive Summary, summarizes the environmental impacts that could result from implementation of the proposed project. Table ES-2 also summarizes mitigation measures that have been identified to minimize or avoid these impacts, and identifies the significant effects and unavoidable significant environmental effects associated with the proposed project. Table ES-2 does not include WGSi proposed mitigation measures, which are considered to be project components.

Cumulative and Growth Inducing Impacts

The CEQA Guidelines require that potential cumulative impacts be assessed by developing either a list of past, present, and probable future projects that would produce related or cumulative effects in combination with the WGSi project, or a summary of projections contained in adopted general plans or related planning documents. The CPUC has determined that, because of the somewhat unique physical nature of the proposed project, neither of these approaches would be entirely appropriate to fully address the potential for cumulative effects. Instead, the CPUC determined that an issue-by-issue examination of potential cumulative effects in specified project areas would be the most expedient and appropriate method for addressing cumulative effects, in accordance with CEQA.

The discussion of cumulative impacts in Chapter 4 of this EIR describes the potential cumulative impacts for each resource topic. For purposes of this analysis, the geographic scope of this impact assessment is limited to the five-mile study area adjacent to and surrounding the proposed project pipeline route. Air quality issues are examined in the context of the entire Northern Sacramento Valley Air Basin.

Most of the project's effects would be temporary, such as the potential impacts associated with construction, and many of the long-term effects are either not additive to the effects of other projects or are so minor as to be not cumulatively considerable.

The CEQA Guidelines also require that the EIR consider whether the proposed project would cause growth-inducing impacts. These are effects that foster economic or population growth or cause the construction of additional housing, either directly or indirectly, in the surrounding environment. This part of the EIR analysis also addresses whether the project would remove obstacles to population growth.

The CPUC concludes that because the proposed project would supply gas to statewide natural gas markets and would not provide a substantial increase in the local retail availability of natural gas supplies, it would not foster growth or remove obstacles to growth in the project area. The increased availability of natural gas is not likely to remove obstacles to growth, but rather would increase competition among energy providers. The competition could reduce reliance on other, more polluting sources of fuel (such as fuel oil), which presently are used during periods of natural gas shortages. The project is therefore not expected to create growth-inducing impacts.

Alternatives to the Project

DEFINITION OF ALTERNATIVES

The CEQA Guidelines require that all lead agencies investigate a reasonable range of alternatives to a proposed project, or to its location, that could feasibly achieve the proponent's objectives. The identified alternatives must focus on eliminating any significant environmental effects of a proposed project or reducing them to a less than significant level, even if the alternatives would be more costly or would to some degree impede the project's objectives. Under CEQA, the discussion of alternatives need not be exhaustive, and the requirement for the discussion of alternative is subject to the "the rule of reason." In other words, an EIR need only consider alternatives that are "feasible," meaning that they can be accomplished in a successful manner within a reasonable period, taking into account economic, environmental, legal, social, and technological factors. CEQA also requires that an EIR analyze the no-project alternative, which describes a scenario in which the proposed project would not be implemented. The environmental impacts associated with the project would not occur. Further, no impacts would occur as a result of the project not being implemented. The effects of the No Project alternative are summarized in the Section 5, Alternatives.

The Applicant proposed several alternative Line 400/401 Connection Pipeline alignments in their Proponent's Environmental Assessment (PEA). The CPUC reviewed these alternative pipeline routes and selected one of the routes for further consideration. The alternatives were named based on the location of the crossing of the Sacramento River.

The alternative reviewed by the Applicant that is analyzed in the EIR is called the Southern Crossing alternative.

The CPUC also developed an additional alternative that runs principally along existing roadways (Northern Crossing alternative). This roadway alternative was developed in response to public concerns presented during the scoping process regarding disruption of agricultural production and bisection of properties. Although use of existing roadways may be preferable in some areas, in other areas this alternative alignment may run closer to more residences than the proposed route. The two alternative routes and the proposed route are illustrated in Figure ES-2.

The Northern Crossing alternative would be aligned in roadways, within road rights-of-ways (ROW), or just outside the ROW, thereby avoiding sensitive garter snake habitat and minimizing impacts to agricultural land uses by avoiding agricultural fields. This route is coincident with the proposed route (Central Crossing) and Southern Crossing at several locations until it connects with the Delevan Interconnect Site.

The Southern Crossing Alternative is coincident with the proposed alignment from the Remote Facility Site to the point in Colusa County where Gridley Road turns. Here the alignment diverges from the proposed alignment, turning south and continuing along Gridley Road and rice field edges, then west to River Road. The Sacramento River crossing location for the Southern Crossing Alternative begins in a clearing between two orchards along the extension of Gould Road outside the river levee. The river crossing for this alternative is 3,700 feet versus 2,400 feet for the proposed alignment.

COMPARISON OF ALTERNATIVES

The following section presents a summary comparison of alternatives presented in this EIR.

PROPOSED ALIGNMENT (CENTRAL CROSSING)

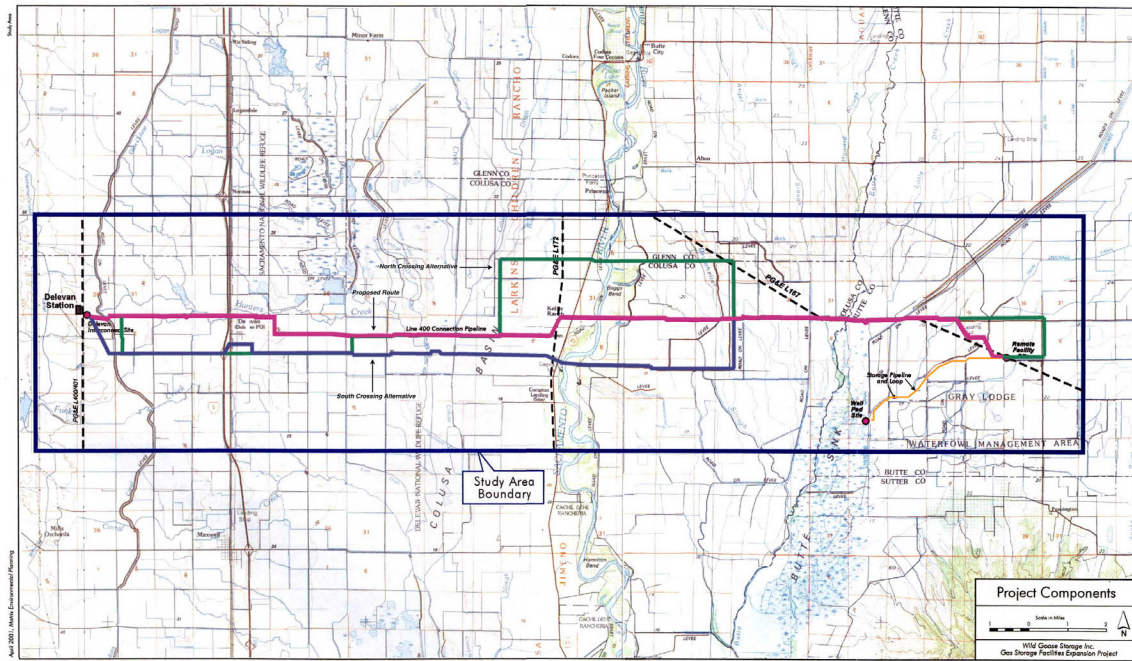
Advantages

- Impacts fewer acres of wetlands than the south crossing alternative (at least 1,500 acres less than the south crossing alternative)
- Shortest total pipeline alignment length among alternatives (25.6 miles)
- Shorter river crossing length than South Crossing
- Orchard affected by this alternative would be a prune orchard that is very old and beyond its most productive years
- Impacts fewest number of residences

Disadvantages

- Impacts the greatest acreage of orchard among the alternatives (11 acres for the proposed alignment vs. 3 acres for the south crossing alternative)
- Effects to giant garter snake habitat

Figure ES-2: Alternative Pipeline Routes



SOURCE: MHA 2002

This Page Intentionally Left Blank

SOUTH CROSSING ALTERNATIVE

Advantage

- Impacts fewer acres of orchards than the proposed alignment (3 acres vs. 11 acres)
- Impacts fewer wetlands than the other alternatives proposed by WGSJ.

Disadvantages

- The alignment through the eastern portion of study area is considered to have higher sensitivity for paleontological resources and also potential habitat for burrowing owl and other sensitive species; this alignment has a longer distance through this area and could result in impact to these resources
- Sacramento River Crossing is about 1000 ft longer than for Proposed route and North Crossing Alternative

Opportunities for Public Comment

The CPUC invites all interested persons to provide comments on the accuracy and completeness of the EIR. Comments can be provided in writing to the CPUC at the address identified on the cover sheet of this EIR. One or more public meetings will also be held to obtain public and agency input on the project and EIR as described on the cover sheet.

All written comments on the EIR received during the public comment period will be addressed in the Final EIR.

Draft Mitigation Monitoring and Reporting Program

A draft Mitigation Monitoring and Reporting Program (MMRP) for the proposed project is contained in Chapter 6 of this EIR. A final MMRP will be prepared if the CPUC approves the project. The final MMRP will incorporate any changes to the project, alternatives, or mitigation measures that are made as a result of the public review process and consideration of the project by the CPUC.

Table ES-2: Summary of Impacts

	Impact	Mitigation Measure	Level of Significance w/ Mitigation
Aesthetics	Impact 3.1-1: Potential for a substantial adverse effect on scenic vista.	None required	
	Impact 3.1-2: Potential to substantially degrade the existing visual character or quality of the site and its surroundings.	None required	

EXECUTIVE SUMMARY

	Impact	Mitigation Measure	Level of Significance w/ Mitigation
	Impact 3.1-3: Potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required	
	Impact 3.1-4: Potential to create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.	None required	
	Impact	Mitigation Measure	Level of Significance w/ Mitigation
Agriculture	Impact 3.2-1: Direct Conversion of Farmland to Non-Agricultural Use	None	Significant and unavoidable
		Mitigation Measure 3.2-1. WGSi shall provide for drainage and irrigation water flow to continue by installing necessary pipes, valves, check dams, berms and dikes in strategic places in cooperation with landowners, farmers and ranchers.	Less than significant
		Mitigation Measure 3.2-2. To mitigate restriction of access to Farmlands, WGSi shall, with proper construction practices, provide notice to affected farmers and/or ranchers, and access for the framers to communicate with the applicant’s construction team on a 24-hour basis. Phone numbers shall be provided on a “hot-line” basis to remedy any such problems before they create losses.	Less than significant
		Mitigation Measure 3.2-3. All restricted pesticide permit requirements as issued by the Butte County and Colusa County Agricultural Commissioner’s offices shall be followed. WGSi shall coordinate with the landowner and both counties to assure that all permit requirements are met without unduly affecting or restricting the agricultural operations. These operations depend	Less than significant

Impact	Mitigation Measure	Level of Significance w/ Mitigation
	<p>on timing of crop treatment to successfully bring crops to harvest. Construction workers may be required to work in other locations during pesticide application periods if the farmer is unable to apply pesticides outside of normal construction hours.</p>	
	<p>Mitigation Measure 3.2-4. Temporary fencing shall be provided in the grazing areas near the Well Pad Site to prevent livestock from straying into the construction areas and to maintain temporary pasture boundaries.</p>	Less than significant
	<p>Mitigation Measure 3.2-5. Topsoil and subsoil removed during construction activities shall be separated and stockpiled in appropriate locations along the edge of ROW. All soil shall be replaced during backfilling and recontouring at the end of construction with topsoil being replaced last. On-site monitoring shall be conducted to ensure that stockpiling does occur, that topsoil and subsoil are stockpiled separately, that stockpiling is done so that there are no resulting adverse impacts to other farming activities (particularly in orchard areas), and that both subsoil and then topsoil is properly replaced. All construction trench and bore pit spoils shall be placed outside the driplines of all orchard trees and other trees.</p>	Less than significant
	<p>Mitigation Measure 3.2-6. Impacts from the Remote Facility expansion shall be reduced by positioning block valves at the perimeter of cropland areas so that interference with planting, tillage, and harvesting is minimized.</p>	Less than significant
<p>Impact 3.2-2: Potential conflict with Existing Designated Land Uses</p>	<p>Mitigation Measure 3.2-7. WGSi shall submit payment of fair market value for crops removed from production by construction or operation of the project.</p>	Less than significant

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation	
Impact 3.2-3: Indirect Conversion of Farmland to Non-Agricultural Use	Mitigation Measure 3.2-8. Silt fencing and / or straw bale barriers shall be placed along the edge of ROW to prevent silt-laden runoff and wet soil sloughing from occurring outside the ROW area.	Less than significant	
	Mitigation Measure 3.2-9. On-site monitoring during these activities and sufficient use of water trucks for spraying dust-generating areas (ROW, access roads, pads, staging areas, etc.) shall be performed to mitigate this potential impact to less than significant levels. Pre-planning for water truck scheduling shall be required during construction activities, and training and monitoring of construction and water truck crews shall also be required.	Less than significant	
	Mitigation Measure 3.2-10. If any organic crops are grown along access roads or ROW areas, monitoring shall be performed to assess conditions prior to construction, and WGSi shall control any increase of noxious weed growth for the growing season after construction is completed.	Less than significant	
	Mitigation Measure 3.2-12. To mitigate significant adverse effects on cattle grazing, WGSi shall provide two cattle water troughs, one north and another south of the ROW from west of the Glenn-Colusa Canal to the Delevan Compressor Station.	Less than significant	
Impact	Mitigation Measure	Level of Significance w/ Mitigation	
Air Quality	Impact 3.3-1: Potential to Conflict with or Obstruct Implementation of the Applicable Air Quality Plan.	None required	
	Impact 3.3-2: Potential to Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation	Mitigation Measure 3.3-1. WGSi shall use adequate dust control measures that are implemented in a timely and effective manner during all phases of project development.	Less than significant

Impact	Mitigation Measure	Level of Significance w/ Mitigation
	Mitigation Measure 3.3-2. Vehicle speeds will be limited to 15 mph on private unpaved roads and the ROW, or as required to control dust.	Less than significant
	Mitigation Measure 3.3-3. Open haul trucks will be covered with tarps both on and off the work site.	Less than significant
	Mitigation Measure 3.3-4. WGSi shall construct an area to wash all heavy equipment vehicle tires before entering paved roadways.	Less than significant
	Mitigation Measure 3.3-5. WGSi shall utilize chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).	Less than significant
	Mitigation Measure 3.3-5. Any soil or mud deposited by construction equipment on paved roads near the egress from unpaved areas will be removed on a daily basis.	Less than significant
	Mitigation Measure 3.3-6. Land clearing, grading, earth moving or excavation activities shall be suspended when winds exceed 20 miles per hour within the project area.	Less than significant
	Mitigation Measure 3.3-7. WGSi shall use alternatives to open burning of vegetative material on the project site unless otherwise deemed infeasible by the AQMD (Among suitable alternatives are chipping, mulching, or conversion to biomass fuel).	Less than significant
	Mitigation Measure 3.3-8. WGSi shall cover all inactive storage piles during construction and operation of the proposed project.	Less than significant
	Mitigation Measure 3.3-9. WGSi shall post a publicly visible sign with the telephone number and person to contact regarding dust complaints at all major construction and operation areas. This person shall respond and take corrective action within 24 hours. The telephone number of the AQMD shall also be visible to ensure compliance with BCAQMD Rule 201	Less than significant

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation	
<p>Impact 3.3-3: Potential to Result in a Cumulatively Considerable Net Increase of any Criteria Pollutant for Which the Project Region is Non-attainment Under an Applicable Federal or State Ambient Air Quality Standard (Including Releasing Emissions, Which Exceed Quantitative Thresholds for Ozone Precursors)</p>	<p>& 207 (Nuisance and Fugitive Dust Emissions).</p> <p>Mitigation Measure 3.3-10. Prior to final occupancy, the applicant shall demonstrate that all ground surfaces have been covered or treated sufficiently to minimize fugitive dust emissions.</p> <p>Mitigation Measure 3.3-11. WGSII shall use fleet vehicles that use clean-burning fuels as may be practical.</p> <p>Mitigation Measure 3.3-12: WGSII shall use non-toxic binders on exposed areas after cut and fill operation and hydroseed areas.</p>	<p>Less than significant</p> <p>Less than significant</p> <p>Less than significant</p>	
<p>Impact 3.3-4: Potential to Expose Sensitive Receptors to Substantial Pollutant Concentrations</p>	<p>None required.</p>		
<p>Impact 3.3-5: Potential to Create Objectionable Odors Affecting a Substantial Number of People</p>	<p>None required.</p>		
Impact	Mitigation Measure	Level of Significance w/ Mitigation	
<p>Biology</p>	<p>Impact 3.4-1: Potential for disturbance or elimination of native vegetation during vegetation management activities</p>	<p>Mitigation 3.4-1. WGSII shall develop and implement an Integrated Vegetation Management Plan</p>	<p>Less than significant</p>

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Impact 3.4-2: Potential for vegetation clearing and soil grading to disturb or eliminate local populations of two special-status plants species - California hibiscus and little mousetail.</p>	<p>Mitigation 3.4-2 (a). Preconstruction surveys for California hibiscus and little mousetail will be initiated by WSGI.</p>	Less than significant
	<p>Mitigation 3.4-2(b). Populations of California hibiscus and little mousetail shall be avoided and protected by WSGI</p>	Less than significant
	<p>Mitigation 3.4-2(c). If avoidance of populations of California hibiscus or little mousetail is not feasible, WSGI shall implement compensatory habitat restoration</p>	Less than significant
<p>Impact 3.4-3: Potential for temporary disturbance of riparian habitat.</p>	<p>Mitigation 3.4-3(a). Trees within the pipeline ROW shall be avoided during construction.</p>	Less than significant
	<p>Mitigation 3.4-3(b). Soil compaction and excavation within the root zone (root zone = 15 feet beyond the drip line of the canopy or tree crown) shall be minimized and protected by appropriate buffers.</p>	Less than significant
	<p>Mitigation 3.4-3(c). If tree roots must be severed or exposed; protective treatments to prevent root drying will be implemented.</p>	Less than significant
	<p>Mitigation 3.4-3(d). Riparian scrub vegetation disturbed at water crossings shall be restored</p>	Less than significant
<p>Impact 3.4-4: Potential for loss and conversion of wetlands.</p>	<p>Mitigation 3.4-4. WSGI shall compensate the loss of 1.4 acres of wetlands by wetlands creation, restoration, or securing mitigation at an appropriate mitigation bank</p>	Less than significant
<p>Impact 3.4-5: Potential to convert freshwater marsh and wet meadow wetlands to other wetland types.</p>	<p>Mitigation 3.4-5. WSGI shall compensate the conversion of 23 acres of wetlands by wetlands creation, restoration, or securing mitigation at an appropriate mitigation bank</p>	Less than significant
<p>Impact 3.4-6: Potential for effects on the habitat of special-status fish species.</p>	<p>Mitigation 3.4-6(a). Drilling of channel crossing bores would be scheduled to avoid the spawning periods of special-status fish.</p>	Less than significant

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Impact 3.4-7: Potential for water withdrawals from perennial streams to adversely affect downstream fisheries and aquatic life.</p>	<p>periods of special-status fish.</p> <p>Mitigation 3.4-6(b). Best Management Practices would be employed to Avoid or Minimize the Discharge of Drilling Mud or Hazardous Materials</p>	<p>Less than significant</p>
<p>Impact 3.4-8: Potential for effects to special-status wildlife species from project construction.</p>	<p>Mitigation 3.4-7. Water Withdrawal for Hydrostatic Testing will be Timed and Conducted in a Manner to Avoid Adverse Effects to Fish and Aquatic Life</p> <p>Mitigation 3.4-8(a). Preconstruction surveys shall be conducted and construction shall be scheduled in giant garter snake habitat to avoid impacts to snakes or their habitat.</p> <p>Mitigation 3.4-8(b). Preconstruction surveys shall be conducted for giant garter snake and protective actions (such as snake removal) shall be initiated prior to implementation of the Habitat Enhancement Plan.</p> <p>Mitigation 3.4-8(c). Preconstruction surveys for northwestern pond turtle shall be conducted and impact avoidance and species protection procedures shall be implemented</p> <p>Mitigation 3.4-8 (d). Preconstruction surveys for Swainson’s hawk shall be conducted and construction activities shall be scheduled to avoid impacts to nest sites.</p> <p>Mitigation 3.4-8(e). Preconstruction surveys for Northern harrier shall be conducted and construction activities shall be scheduled to avoid impacts to nest sites.</p> <p>Mitigation 3.4-8(f). Preconstruction surveys for Western yellow-billed cuckoo shall be conducted and construction activities shall be scheduled to avoid impacts to nest sites</p> <p>Mitigation 3.4-8(g). Preconstruction surveys for Loggerhead shrike shall be conducted and construction activities shall be scheduled to avoid</p>	<p>Less than significant</p> <p>Less than significant</p>

Impact	Mitigation Measure	Level of Significance w/ Mitigation
	<p>impacts to nest sites.</p> <p>Mitigation 3.4-8(h). Preconstruction surveys for American bittern shall be conducted and if present, nest sites shall be protected by appropriate buffers during construction.</p> <p>Mitigation 3.4-8(i). Preconstruction surveys for White-faced ibis shall be conducted and if present, nest sites shall be protected by appropriate buffers during construction.</p> <p>Mitigation 3.4-8(j). Preconstruction surveys for Black tern shall be conducted and if present, nest sites shall be protected by appropriate buffers during construction.</p> <p>Mitigation 3.4-8(k). Preconstruction surveys for Tricolored blackbird shall be conducted and if present, nest sites shall be protected by appropriate buffers during construction.</p> <p>Mitigation 3.4-8(l). Preconstruction surveys for Western burrowing owl shall be conducted and if required, species protection, or species relocation plans shall be implemented.</p> <p>Mitigation 3.4-8(m). Protective measures will be implemented to prevent Bank swallow nesting in potentially high impact construction zones</p> <p>Mitigation 3.4-8(n). Preconstruction surveys for elderberry shrubs shall be initiated by WSGI and, as appropriate, avoidance through project redesign shall be implemented.</p>	
<p>Impact 3.4-9: Exposed pipeline trenches or bores could pose a barrier to wildlife movement and result in increased wildlife mortality.</p>	<p>None required.</p>	
<p>Impact 3.4-10: Potential exposure of nesting birds to sudden noise emissions greater than ambient noise levels</p>	<p>Mitigation 3.4-10(a). WSGI will schedule blowdowns at the Sacramento River to avoid impacts to sensitive bird species (see WSGI</p>	<p>Less than significant</p>

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation
levels	Measure 3.10-4).	
	<p>Mitigation 3.4-10(b). Operations blowdowns and emergency shutdown valve blowdowns shall be routed into silencers (see WSGI Measure 3.10-2).</p>	
	<p>Mitigation 3.4-10(c). WSGI will reduce the gas / volume in the pipeline to a minimum prior to a planned maintenance blowdown (see WSGI Measure 3.10-3).</p>	
<p>Impact 3.4-11: Potential introduction and spread of noxious weeds</p>	<p>Mitigation 3.4-11(a). WSGI will implement an equipment-washing program to control the introduction and potential spread of noxious weeds.</p>	<p>Less than significant</p>
	<p>Washing of construction equipment before such equipment is delivered to the project site will be implemented to control the introduction of potentially noxious weeds to the project area. In addition, only weed-free materials will be used to for erosion control materials.</p>	
	<p>Mitigation 3.4-11 (b). WSGI shall implement a weed eradication program if weeds are introduced to construction areas.</p>	<p>Less than significant</p>
	<p>All construction areas revegetated by the project will be monitored to ensure that noxious weeds are not present. If noxious weeds do occur on the pipeline ROW in numbers exceeding those in populations adjacent to the ROW, in areas not disturbed by construction, a noxious weed control program will be implemented. This program would be a component of the Integrated Vegetation Management Plan (see Mitigation 3.4-9) and would involve eradication of weeds by a combination of grubbing or chemical spraying pursuant to the IVM goals of environmentally sound vegetation management.</p>	

Impact	Mitigation Measure	Level of Significance w/ Mitigation
Cultural Resources	Impact 3.5-1: Potential for Loss of Integrity and/or Alteration of Identified Resources Potentially Eligible for the NRHP and CRHR.	Less than significant
	Mitigation Measure 3.5-1. The contractor shall observe reclamation district requirement that a minimum distance of 15 feet be maintained between the toe of any canal/levee and the construction right-of-way to or 10-foot distance indicated in Section 7.1, Resource Protection of the HPMP (whichever is applicable) to insure protection of the resources.	Less than significant
	Mitigation Measure 3.5-2: The project proponent shall retain a qualified archaeologist to conduct the appropriate studies as required by the HPMP. Qualifications for the archaeologist would be consistent with those found in the HPMP.	Less than significant
Impact 3.5-2: Potential for Disturbance to Previously Unidentified Cultural Resources during Project Construction, Operations, and Maintenance.	Mitigation Measure 3.5-3. Prior to the initiation of construction or ground disturbing activities, all construction personnel shall be alerted to the possibility of buried cultural remains, including prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural materials, work in the immediate area of the find shall be immediately halted and the WGSJ project manager shall be notified. Once the find has been identified by a qualified archaeologist, then archaeologist, in conjunction with the WGSJ project manager, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts consistent with Section 7.3, Discoveries During Construction of HPMP. If the resource is found to be eligible for the NRHP or CRHP, then Mitigation Measures 3.5-1 through 3.5-5 would apply.	Less than significant
	Mitigation Measure 3.5-4. If buried human remains are encountered during construction, work shall be immediately halted, and the appropriate state or county agency and county coroner shall be immediately notified. If the remains are determined to be Native American, then the Native American Heritage Commission (NAHC) would	Less than significant

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation
---------------	---------------------------	--

be notified within 24 hours as required by Public Resources Code 5097. The NAHC shall designate a Most Likely Descendants that would provide recommendations for the treatment of the remains within 24 hours. Protection procedures would follow those found in Section 7.4, Discovery of Native American Skeletal Remains and Appendix 1, Native American Burial Plan of the HPMP.

Impact	Mitigation Measure	Level of Significance w/ Mitigation
---------------	---------------------------	--

Geology	Impact 3.6-1.1: Potential for Effects from Faulting or Uplift.
----------------	---

Mitigation Measure 3.6-1: The Applicant shall assess the pipeline response to surface faulting using a detailed nonlinear pipe-soil interaction analysis model for a case-specific evaluation of the Willows fault crossing. The model shall consider different possible fault offsets (or local uplifts) and slip vectors, different fault crossing geometries, different wall thickness and different steel grades for the selected pipeline diameter. The analysis shall consider both the fault offset required to reach the failure (loss of pressure integrity) limit state and to reach the damage limit states (i.e., incipient wrinkling) as a measure of the fault crossing design performance. A detailed plan for the analysis shall be prepared for review by the CPUC (or its designated consultants) and the analysis methodology shall be approved by the CPUC prior to the Applicant preparing the analysis. Results of the analysis shall be used in the design of the pipeline section within a reasonable distance (to be reviewed and approved by the CPUC or its designated consultants) of the projected location of the Willows fault and the mapped anticlinal feature adjacent to the Sacramento River.

Less than significant

Impact	Mitigation Measure	Level of Significance w/ Mitigation
Impact 3.6-1.2: Potential for Effects from Strong Seismic Ground Shaking.	Mitigation Measure 3.6-2: The Applicant shall provide the CPUC with a plan to analyze pipeline response to ground shaking and traveling wave effects based on the unique geologic conditions along the pipeline routes (Line 400/401 and the Loop Pipeline) and the conservative levels of groundshaking determined by Kleinfelder. The CPUC shall review and approve a final analysis plan prior to final design.	Less than significant
Impact 3.6-1.3: Potential to Expose People or Structures to Effects from Liquefaction and Dynamic Compaction	Mitigation Measure 3.6-3. The Applicant shall drill new borings at the final Sacramento River crossing site, using the drilling and sampling techniques recommended by Martin and Lew (1999). These borings shall be performed at the locations with possibly the thickest liquefiable soil deposits, to confirm the SPT blow counts measured (with or without sample rings and considering gravel) and the estimates of liquefaction-induced settlements and lateral deformations. It is possible that the additional field investigation scope may be reduced if a parametric/sensitivity analysis can be performed to investigate the effects of possible lower blow counts and thicker liquefiable soil layers on the liquefaction-induced hazards discussed in Appendix A (Kleinfelder, 2001e). A detailed plan for the drilling, sampling, and analysis shall be prepared for review by the CPUC (or its designated consultants) and the analysis methodology shall be approved by the CPUC prior to the Applicant preparing the analysis. Results of the analysis shall be used in the design of the pipeline section within a reasonable distance (to be reviewed and approved by the CPUC or its designated consultants) of the Sacramento River crossing.	Less than significant
	Mitigation Measure 3.6-4. The Applicant shall compile data in City, State, or County files, and to obtain new data on shallow water	Less than significant

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Impact 3.6-1.4: Potential to Expose People or Structures to Adverse Effects from Liquefaction and Cause Lateral Spread Landslides</p>	<p>levels and the density of shallow geologic materials so that a broad-area assessment of areas with potential for liquefaction along the pipeline alignment can be made. Results of the analysis shall be used in the design of the pipeline section crossing identified potentially liquefaction-prone areas (to be reviewed and approved by the CPUC or its designated consultants).</p> <p>Mitigation Measure 3.6-5: The Applicant shall complete Mitigation Measure 3.6-3 above, including drilling new borings in areas adjacent to the final Sacramento River crossing site, where lateral spreading landslides are most likely to occur based on topography.</p>	<p>Less than significant</p>
<p>Impact 3.6-2: Potential for Soil Erosion or the Loss of Topsoil</p>	<p>None required.</p>	
<p>Impact 3.6-3: Potential for Impacts due to Unstable Soils or Subsidence</p>	<p>None required.</p>	
<p>Impact 3.6-4: Potential for Effects Related to Expansive Soils</p>	<p>None required.</p>	
<p>Impact 3.6-5: Potential for Effects to Extraction of Mineral Resources</p>	<p>Mitigation Measures 3.6-6: The Applicant shall undertake and complete a modeling study to define possible in-stream mining and floodplain mining scenarios and the potential impacts of the scenarios on the pipeline at the preferred depths. Based on the modeling study the final depth of burial below the river bottom shall be determined. A plan for the modeling study shall be prepared for review by the CPUC. The analysis methodology shall be approved by the CPUC prior to the Applicant preparing the analysis. Results of the analysis shall be used in the design of the pipeline section crossing the Sacramento River (to be reviewed and approved by the CPUC).</p>	<p>Less than significant</p>

	Impact	Mitigation Measure	Level of Significance w/ Mitigation
	Impact 3.6-6: Potential to Overcover or Preclude Extraction of Natural Gas or Sand and Gravel Mineral Resources	None required.	
	Impact	Mitigation Measure	Level of Significance w/ Mitigation
Hazards	Impact 3.7-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	None required.	
	Impact 3.7-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	<p>Mitigation Measure 3.7-1. WGSi will submit core sample analysis protocols to the CPUC technical team for review and approval prior to conducting tests on new core samples.</p> <p>Test data on new core samples will be submitted to the CPUC technical team for review. If new data indicates that cap rock strength is different (substantially lower) than indicated by previous tests, operating and injection pressures would be reduced to maintain an appropriate level of safety consistent with DOGGR safety guidelines.</p>	Less than significant
		<p>Mitigation Measure 3.7-2. WGSi will conduct in-situ stress tests of the project relevant cap rock intervals in at least one well when drilled. If in-situ stress tests results are not consistent with core sample test results, re-evaluation of operating pressures may be necessary. If in-situ stress tests indicate that cap rock strength is substantially less than currently believed, operating and injection pressures would be reduced to maintain an appropriate level of safety consistent with DOGGR guidelines.</p>	Less than significant
		Mitigation Measure 3.7-3. The Brady #1-20 shall be inspected and tested immediately to ascertain its condition.	Less than significant

Impact	Mitigation Measure	Level of Significance w/ Mitigation
	<p>immediately to ascertain its condition. This well shall be located and soil surrounding it excavated to expose the well casing. An attempt should be made to tap (drill a small hole) the plate welded onto the casing, and test for gas. If gas were present, a sample would be extracted and collected for further analysis. Depending on gas origin, if present, appropriate remedial actions (re-abandonment) would be implemented. Routine inspection, monitoring and testing of this well would continue for the duration of the gas storage operation. WGSi shall prepare a report of investigation and remedial actions taken. This report shall be submitted to the CPUC and DOGGR prior to initiating gas storage activities in additional storage zones. Annual inspection of this abandoned well would be included as part of the WGSi inspection program. Annual reports would be submitted to CPUC and DOGGR upon inspection completion. With these immediate (inspection, testing and remediation) and on-going (annual inspection) mitigation measures, potential impacts associated with leaks from the Brady #1-20 would be less than significant.</p>	
	<p>Mitigation Measure 3.7-4. Prior to initiating new gas storage operations, WGSi shall conduct a soil-gas survey in the vicinity around each abandoned well within the storage zone boundaries to define current shallow subsurface gas conditions and document that storage gas is not currently leaking. If soil-gas is detected, samples should be collected for laboratory analysis. Samples would be analyzed to determine if any natural gas collected is of biogenic, thermogenic or storage zone origin. All testing and sampling plans would be submitted to CPUC for review and approval by a qualified member of the technical team (Registered Geologist with appropriate background evaluating</p>	<p>Less than significant</p>

Impact	Mitigation Measure	Level of Significance w/ Mitigation
	soil-gas). If wells are found to be leaking, the leaking well would be remediated in consultation with CPUC and DOGGR.	
	Mitigation Measure 3.7-5. At the end of each injection cycle, WGSi shall conduct well inspections, testing and leak surveys for each abandoned well in the field. If gas is detected, samples should be collected and analyzed to determine its source or origin. Necessary remedial actions would be implemented to address the leak. All testing and sampling plans would be submitted to CPUC and DOGGR for review and approval by a qualified member of the technical team (Registered Geologist with appropriate background evaluating soil-gas).	Less than significant
	Mitigation Measure 3.7-6. In addition to regularly scheduled well tests, WGSi shall test any well if other indicators or leaks are present (gas bubbles, distressed vegetation) in the immediate well vicinity. WGSi would submit all well test and repair records to DOGGR, CPUC and Butte County. Any well leaks detected would be reported immediately to these agencies. With DOGGR oversight, WGSi would implement appropriate remedial actions to repair detected leaks.	Less than significant
Impact 3.7-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required.	
Impact 3.7-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	None required.	
Impact 3.7-5: Potential for the project to result in a safety hazard for people residing or working in the project area based on a proposed location	None required.	

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>near an airport.</p> <p>Impact 3.7-6: Potential to expose people or structures to a significant risk of fire or explosion.</p>	<p>Mitigation Measure 3.7-8. During periodic well testing and leak surveys, evaluate the area overlying the documented faults along the southern field boundary. This will require installation of at least three permanent soil gas probes. Each probe would be monitored during routine leak surveys. If gas were detected in these probes, samples would be collected and analyzed to determine gas origin. All testing and sampling plans, along with probe design and installation procedures, will be submitted to a qualified member of the CPUC.</p> <p>If storage gas is found leaking through the fault or fracture zone along the southern side of Wild Goose Field, storage activities would be reduced to restrict the volume of gas stored in the field until further investigations are conducted. New data from exploratory wells could be required in order to redefine storage reservoir boundaries near the fault or fracture zone area. Based on this new data and revised reservoir boundary conditions, allowable storage volumes would be reduced to prevent storage gas from reaching the fault zone and maintain an appropriate level of safety. All studies and remedial actions would be conducted under the supervision of DOGGR and CPUC technical staff (California Registered Geologist) with the appropriate background to evaluate gas migration through fault or fracture zones.</p>	<p>Less than significant</p>
	<p>Mitigation measure 3.7-9: The standard “monitored and maintained” seismic design approach would accept significant levels of plastic pipe strain for low probability design events and utilize post-earthquake review and inspection to identify locations where permanent ground displacement-induced (PGD-induced) damage may have occurred. Considering this approach, the</p>	<p>Less than significant</p>

Impact	Mitigation Measure	Level of Significance w/ Mitigation
	<p>Applicant shall prepare (prior to final project approval) a post-earthquake monitoring plan in which an accurate "as-built" base line of the pipeline geometry at/near know seismic hazards will be clearly identified. This plan shall become part of the existing Emergency Plan and will allow rapid response to the most probable damage areas in the event of a severe earthquake.</p>	
	<p>Mitigation Measure 3.7-10: All of the measures of pipe demand and capacity considered in Appendix A of the Kleinfelder report (2001e) are based on the failure condition (i.e., the loss of pressure integrity limit state). The loss of pressure integrity condition occurs in the post wrinkling condition, i.e., well beyond the peak in the moment curvature diagram. As the wrinkle forms, the moment capacity decreases with increasing curvature. Pipe curvature tends to concentrate in the wrinkle (sometimes referred to as "hinging") while the pipe on either side of the wrinkle tends to straighten and unload elastically. It is not necessary to account for hinging action in demand-capacity assessments that are limited to consideration of the incipient wrinkling limit state. This is because the concentration of curvature is still relatively limited. For all pipe deformation demand-capacity assessments, which make use of post-wrinkling demand-capacity measures, the Applicant shall account for the concentration of curvature at the wrinkle, because demand analyses, which do not include this hinging behavior, can significantly underestimate the pipe strain demand. The CPUC shall review and approve the analysis methodology in advance of its application to the final design.</p>	Less than significant
	<p>Mitigation Measure 3.7-11: In addition to the seismic demand required to reach the loss of pressure integrity limit state, for all of the PGD</p>	Less than significant

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Impact 3.7-7: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<p>analyses the Applicant shall incorporate into their final design different “damage” limit states (e.g., incipient wrinkling) that can occur well before the failure limit state is reached. The CPUC shall review and approve the analysis methodology in advance of its application to the final design.</p>	
	<p>Mitigation Measure 3.7-12: The PGD demand analyses for PGD parallel to and perpendicular to the pipe alignment discussed in Appendix A of the Kleinfelder report (2001e) are based on simplified hand or spreadsheet calculations methods. The Applicant shall utilize a rigorous analysis and design approach, nonlinear pipe-soil interaction analysis, for evaluating PGD effects for all but the simplest cases.</p>	<p>Less than significant</p>
	<p>Mitigation Measure 3.7-13: Further analysis by the Applicant of generic perpendicular PGD scenarios shall consider a range of soil block lengths (i.e., span lengths) rather than a single span length. The critical span length shall be considered the soil block length that generates the largest strain for given amplitude of a selected PGD profile.</p>	<p>Less than significant</p>
	<p>Mitigation Measure 3.7-14: The Applicant shall provide a more formal limit states seismic design for the final pipeline design to the CPUC prior to final design. The framework of such a procedure shall include: identification of ultimate and serviceability limit states, application of appropriate load (demand) factors and load combinations, application of appropriate resistance (capacity) factors, structural analysis to calculate pipe deformation demand, and a demand-capacity comparison for each limit state of interest.</p>	<p>Less than significant</p>
	<p>Mitigation Measure 3.7-15: The Applicant shall update the existing Emergency Response Plan to reflect the new project components and operations. The updated plan shall</p>	<p>Less than significant</p>

Impact	Mitigation Measure	Level of Significance w/ Mitigation
evacuation plan.	also include specific dates and frequencies with regard to the re-training of existing employees, and the contact with Emergency Services Providers and property owners about the Plan. The update shall indicate the nature and extent of the proper training and indoctrination to ensure effective interaction of all responsible parties in the Plan if an accident were to occur.	
Hydrology	Impact 3.8-1. Potential to Substantially Degrade Surface and Groundwater Water Quality	Less than significant
	Mitigation Measure 3.8-1. In addition to visual observation of waterways, provide continuous monitoring of drilling fluid pressures while advancing each pipeline bore. If fluid pressure changes indicate possible problems, cease boring operations immediately until conditions are stabilized.	
	Mitigation Measure 3.8-2. No hazardous or potentially hazardous materials shall be stored on-site at the well pad.	Less than significant
	Mitigation Measure 3.8-3. Prior to project implementation, water samples would be collected from water well number 17N01E-17F01M, located at the Tule Goose Gun Club. Dissolved gases would be analyzed to ascertain if methane is present. If detected, methane would be further analyzed to determine its origin (biogenic, thermogenic or storage gas) to establish baseline conditions. If storage gas were detected, appropriate investigations would be conducted to find the gas leak source and initiate remedial actions as necessary. Water samples would be collected and analyzed for methane annually, as part of the WGSi field monitoring program. Results would be reported to DOGGR, CPUC, RWQCB and DWR. Remedial actions would be implemented as deemed necessary by these State agencies.	Less than significant

		<p>Mitigation Measure 3.8-4. With regard to buoyant uplift effects, both beam and cable effects shall be included in buoyant uplift calculations. Also, buoyant span lengths other than 100 feet shall be considered. The critical span length is the length that generates the largest strain for a given amplitude of a selected buoyant uplift profile.</p>	Less than significant
	<p>Impact 3.8-2: Potential to Substantially Deplete Groundwater Supply</p>	<p>Mitigation Measure 3.8-5. Locate all water supply wells in the project vicinity. After identifying the approved pipeline route and developing initial pipeline construction design plans, and prior to initiating construction, delineate wells in the immediate vicinity of the selected route. Conduct a hydrogeological investigation to determine de-water effects on the nearby area wells. Based on results of the hydrogeological investigation, modify construction plans or de-watering methods, if necessary, to protect local groundwater supplies. The hydrogeological investigation shall be conducted by a California Certified Hydrogeologist or Certified Engineering Geologist with an appropriate background in evaluating impacts to water wells associated with surface de-watering activities. The revised plans or de-watering methods must be reviewed and approved by the CPUC prior to implementing those operations.</p>	Less than significant
	<p>Impact 3.8-3: Potential for Flooding or to Place Structures within a 100-year Flood Hazard Area</p>	<p>Mitigation Measure 3.8-6. The berm around the well pad shall be designed to withstand exposure to flood waters anticipated during a 100-year and 500-year event. Berm height shall be sufficiently high to exceed high water surges. Berm design shall include measures to protect exposed surfaces from erosion and to minimize water seepage through the berm (internal erosion called piping).</p>	Less than significant
	<p>Impact</p>	<p>Mitigation Measure</p>	<p>Level of Significance w/ Mitigation</p>
<p>Land Use</p>	<p>Impact 3.9-1: Physically Divide an Established Community.</p>	<p>None required.</p>	

	Impact	Mitigation Measure	Level of Significance w/ Mitigation
	Established Community.		
	Impact 3.9-2: Conformance with Land Use Plans, Policies, and Regulations	None required.	
	Impact 3.9-3: Conflict with Habitat Conservation or Natural Community Conservation Plans	None required.	
	Impact	Mitigation Measure	Level of Significance w/ Mitigation
Noise	Impact 3.10-1: Potential for exposure to noise levels in excess of standards	None required	Less than significant
	Impact 3.10-2: Potential for exposure of people to excessive ground borne vibration	None required.	
	Impact 3.10-3: Potential for permanent increase in ambient noise levels	Refer to mitigation for Impact 3.10-1.	Less than significant
	Impact 3.10-4: Potential for temporary or periodic increase in ambient noise levels	None required.	Less than significant
	Impact 3.10-5: Exposure of people to excessive noise in areas designated for airport use	None required.	
	Impact 3.10-6: Potential exposure of people to excessive noise in the vicinity of a private airstrip	None required	Less than significant
	Impact	Mitigation Measure	Level of Significance w/ Mitigation
Population and Housing	Impact 3.11-1: Potential for Substantial Population Growth in the Area, Either Directly or Indirectly	None required.	
	Impact 3.11-2: Potential to Displace Substantial Numbers of Existing Housing, Necessitating the Construction of Replacement	None required.	

EXECUTIVE SUMMARY

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Housing Elsewhere</p> <p>Impact 3.11-3: Potential to Displace Substantial Numbers of People, Necessitating the Construction of Replacement Housing Elsewhere</p>	None required.	

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Public Services and Socioeconomics</p> <p>Impact 3.12-1: Potential to Increase the Demand for Public Services in Excess of their Existing and/or Projected Capabilities</p>	None required.	
<p>Impact 3.12-2: Potential To Cause A Substantial Increase In Acceptable Service Ratios, Response Times, Or Other Performance Objectives For All Emergency Response Providers</p>	Refer to Mitigation Measure 3.15-1	Less than significant
<p>Impact 3.12-3: Potential To Cause A Quantifiable Reduction in the Value Of Properties Crossed By The Pipeline Or Substantially Impact The Economies Of Those Communities Affected by the Proposed Project</p>	None required.	
<p>Impact 3.12-4: Potential To Result In A Disruption In The Balance Between Employment Opportunities And Available Housing In An Area</p>	None required.	

Impact	Mitigation Measure	Level of Significance w/ Mitigation
<p>Transportation</p> <p>Impact 3.14-1: Potential for Temporary Disruption in Circulation from Project Construction</p>	None required	Less than significant
<p>Impact 3.14-2: Temporary Increase in Traffic in the Project Area During Construction</p>	None required.	

	Impact	Mitigation Measure	Level of Significance w/ Mitigation
	Impact 3.14-3: Potential for Interference with Emergency Response Routes and Accesses	None required	Less than significant
	Impact 3.14-4: Potential for Increase in Traffic During Project Operation	Mitigation Measures 3.14-1. Develop an Operations Road Maintenance Plan. WGSi shall prepare and implement a Road Maintenance Plan for use during operations and maintenance activities. The Plan objectives are to minimize road impacts due to project operation, and to establish a procedure to maintain existing access roads to a specified condition. The Plan will outline performance requirements for the road condition, prescribe responsibilities and coordination with adjacent property owners/tenants, identify a road maintenance schedule, and determine types of repairs necessary on an ongoing basis.	Less than significant
	Impact	Mitigation Measure	Level of Significance w/ Mitigation
Utilities	Impact 3.15-1: Potential to Exceed Wastewater Treatment Requirements	None required	
	Impact 3.15-2. Potential for Construction/Expansion of Water or Wastewater Treatment Facilities	None required.	
	Impact 3.15-3. Potential for Construction/Expansion of Storm Drainage	None required.	Less than significant
	Impact 3.15-4. Sufficient Water Supply	None required.	
	Impact 3.15-5. Adequate wastewater treatment, septic system, and pumper and hauler service capacity	None required.	
	Impact 3.15-6. Adequate Capacity for Solid Waste Disposal	None required.	
	Impact 3.15-7. Compliance with Solid Waste Regulations and Statutes	None required.	

