4: CUMULATIVE AND GROWTH-INDUCING IMPACTS

4.1 Introduction

This section discusses the potential cumulative and growth-inducing impacts associated with the proposed project, according to CEQA requirements. Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental effects. Section 15130(a) of the CEQA Guidelines states that:

> An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable…Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable', a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

This section provides descriptions of related projects in the vicinity of the proposed project that could potentially contribute to cumulative environmental effects in the area. The potential for cumulative impacts associated with the proposed project are discussed for each resource section. Following the cumulative impact discussion, this section addresses the potential for growth-inducing impacts associated with the proposed project.

4.2 Related Projects

The cumulative impact analysis considers impacts of the proposed project and other projects that are reasonably foreseeable to take place in the vicinity of the proposed project. The primary activities associated with other projects in the area include power plant development and geophysical activities for natural gas exploration activities in the

area. Expansion of the PG&E backbone would be necessary to accommodate the additional load demand on PG&E's 400/401 line associated with the proposed project. Potential impacts associated with this expansion are also discussed.

RELATED PROJECTS

Venoco, Inc. Sanborn Slough 3D

Venoco Inc. submitted an application to the County of Colusa for authorization to conduct a geophysical data acquisition project in the northeast corner of Colusa County and the southwest corner of Butte County. The Venoco project overlaps the eastern portion of the project area with the westernmost boundary of the Venoco project located on the west side of the Sacramento River. Venoco prepared and submitted an Initial Study for the County in October 2001. The Venoco project was presented to and approved by the Colusa County Planning Commission on January 7, 2002.

The project involves a short-term geophysical survey to acquire geophysical data in order to evaluate natural gas reserves in the project area. The project consists of three phases, the Survey Phase, Drilling Phase, and Data Acquisition Phase implemented over a period of two to three months. During the survey phase, surveyors will use a global positioning system (GPS) to establish a temporary grid of receiver lines and source lines within the project area. During the drilling phase, crews will utilize explosives to generate seismic energy required to conduct the survey. Source points will be established where explosives will be buried for a period of up to 30 days with holes drilled to a maximum depth of 30 feet. During the data acquisition phase, explosives will be detonated and used as the energy source for recording seismic data at each predetermined source.

Venoco is tentatively scheduled to begin work in the summer of 2002; however, this schedule and particular components of the project are currently being negotiated in response to environmental concerns raised by land owners in the project area (Johanns 2002).

Reliant Energy Colusa Power Plant Project

On July 6, 2001, Reliant Energy filed an Application for Certification of the Colusa Power Plant Project with the California Energy Commission (CEC, 01-AFC-10). The project is currently under review by the CEC. Reliant Energy proposed to construct a 500 MW natural gas-fired power plant approximately 900 feet west of PG&E's Delevan Compressor Station within the WGSI proposed project boundaries. The project would incorporate two combustion gas turbines that would burn natural gas and a steam turbine driven with steam generated by Heat Recovery Steam Generators (HRSGs). Each combustion gas turbine and the steam turbine would be connected to one of three separate electric generators. Output of the generators would be connected to step-up transformers and then to a new PG&E switchyard.

Linear facilities would include a new 2500-foot-long natural gas interconnecting pipeline to the existing gas backbone system and a new 2300-foot-long water supply to deliver water to the site from the Tehama-Colusa Canal. The Colusa Power Project (CPP) would be interconnected to PG&E's northern California transmission grid at PG&E's Cottonwood to Vaca-Dixon 230 kV lines via a new substation to be built at the site.

The proposed project site for the power plant is located adjacent to Delevan Road approximately 4 miles to the west of Interstate 5 (I-5) and adjacent to PG&E's lines 400/401. The project, including a new switchyard, would occupy approximately 27 acres in the remote rural area once construction is completed. Construction at the 26-acre plant site was originally expected to begin in April 2002, with peak construction occurring between April and July 2003 when approximately 600 workers would be on site. If approved, the CPP planned to begin commercial operation in the second quarter of 2004 following the 22-month construction period. However, this schedule has been delayed due to a recent request by the California Energy Commission staff to revise the schedule to extend the 6-month review to a 12-month process. On December 14, 2001 Energy Commission Staff requested that the project schedule be extended "pending receipt of complete 'critical path' items".

Calpine Sutter Power Plant

The Calpine Sutter Power Plant is a 540 MW natural gas-fired, combined cycle facility located in Sutter County, approximately 25 miles south of the Remote Facility Site. Calpine Sutter Power Plant began operations on July 2, 2001. It is adjacent to Calpine's Greenleaf Unit 1, a gas-fired, cogeneration power plant located approximately 7 miles southwest of Yuba City. The land used for the project comprises 10-13 acres of Calpine's existing 77-acre parcel. The project includes a 12-acre plant site, a 14-mile natural gas pipeline and a 4-mile electric transmission tower line.

The project is expected to contribute to the local economy by employing about 20 permanent workers during operations. The project site was originally zoned for agricultural uses. Calpine requested Sutter County to permit a rezone of the 77-acre parcel to a Planned Development site. A new 12 mile natural gas pipeline was constructed to provide fuel for the project. The 16-inch pipeline connects to an existing PG&E natural gas supply located to the west of the facility site.

Other Projects

Sutter County reports that they are currently processing a development application for an industrial park in the south part of the county near the county line, approximately 35 miles south of the project study area. Colusa County reports a recently completed public works project to improve a levee along Powell Slough just west of the City of Colusa. In addition, Williams Communications is installing fiber optic cables at various locations in the county as part of a statewide program. In Glenn County, the Planning Department recently approved a development permit for a gravel extraction project near Orland, approximately 25 miles north of Delevan. This project is not located adjacent to the Sacramento River and therefore would not contribute to potential impacts associated with scour of the proposed pipeline. Due to the relatively small size of these projects and their distance from the proposed Project area, it is assumed that the proposed Project would not contribute significantly to cumulative effects coincident with these projects.

CONSTRUCTION OVERLAP

Due to the uncertainty associated with project construction schedules, particularly for the Reliant Energy CPP Project and the Venoco Project, it is difficult to estimate potentially overlapping construction-induced impacts. According to the Colusa County Planning Department, the majority of construction activities associated with the Venoco Project are

expected to take place in the summer of 2002. However, the schedule for the project is still under negotiation, and therefore, not definite. Currently, there is no anticipated time frame for construction activities associated with the CPP Project due to the CEC staff's request for a stay on the project pending review of certain 'critical path items'. The CEC is currently scheduled to make a decision on the CPP Project in May 15, 2002, assuming no additional delays. Although construction activities for the proposed Project may not overlap with either of these projects, due to the uncertainty associated with these schedules, this cumulative analysis assumes the maximum potential for cumulative impacts associated with these projects (i.e. assumes construction activities could occur simultaneously). If construction does occur simultaneously, WGSI would coordinate with Venoco and/or Reliant to minimize potential impacts to traffic congestion, noise, and/or hazards in the area.

BACKBONE EXPANSION

Expansion of the PG&E Backbone would likely require construction of a compressor station south of the Delevan interconnect site. The details associated with this expansion have not yet been defined. Potential impacts associated with an additional compressor could include land use, noise, air quality, and aesthetics impacts, depending on the specific location of the compressor. These impacts would not be significant.

4.3 Cumulative Impacts

AESTHETICS

The proposed project would add built structures to the landscape that would contribute to the industrial appearance of portions of Colusa and Butte Counties. The proposed expansion of the Remote Facility Site and the introduction of block valve along the alignment of the Line 400/401 Connection Pipeline would result in a potentially significant visual impact that can be reduced to a less than significant level with appropriate mitigation. With the application of proposed mitigation measures the proposed project is not expected to contribute to cumulative impacts on aesthetics in the project area.

AGRICULTURE

Appendix G of the CEQA Guidelines states that projects that would permanently remove prime agricultural land from production are considered to have significant, unavoidable impact for which mitigation cannot offset the loss to less than significant levels. Section 3.2, Agricultural Resources, describes agricultural resources that would be permanently impacted by the proposed project and therefore would contribute to cumulative impacts on agricultural resources in the area.

The proposed project would result in temporary removal of about 221 acres from agricultural production during construction of the proposed project (see Table 3.2-1). The Remote Facility Site expansion would permanently remove 5.8 acres of prime agricultural land from production. The maximum number of valve lots and their locations were not specified prior to design, but each of these lots, if located on prime cropland, would remove that land from production. Permanent conversion of Prime Farmland to other uses at the Remote Facility Site and potentially at the valve lots (not yet sited) are considered unavoidable impacts. The losses of agricultural land cannot be mitigated. The proposed

project would contribute to the cumulative conversion of Prime Farmland into other land uses. This is considered a significant cumulative impact that cannot be mitigated.

AIR QUALITY

Section 3.3, Air Quality, outlines standards for ozone and particulate matter that are exceeded in the air basin. The proposed project would generate air emissions that could substantially exacerbate these violations. Cumulative impacts could result during operation of some new facilities if operations occur simultaneously with construction activities. The Applicant would comply with AQMD rules on operational emissions and maintain substantial source-receptor distances to pollution-sensitive receptors to reduce air quality impacts to a less than significant level. The proposed project would include retrofitting existing facilities and building new facilities with Best Available Control Technologies (BACT) to remain under the permit emissions cap authorized by the current air permit. Each of the projects discussed in this section would comply with requirements of the AQMD with jurisdiction over that project. It is not anticipated that the proposed project would significantly contribute to cumulative air quality impacts in the area.

BIOLOGICAL RESOURCES

Section 3.4, Biological Resources, states that the proposed project would result in impacts to wetlands in the project area, particularly at the Well Pad Site. This loss of wetland habitat represents the principal permanent impact that could potentially contribute to cumulative wetland habitat loss in the area. Approximately 1.4 acres of potential giant garter snake and northwestern pond turtle habitat would be permanently lost due to placement of fill onto existing wetlands around the well pad (Table 3.4-3). The direct impact could be direct mortality or displacement of either species, or disruption of breeding and foraging activities. The fill of the wetland would result in habitat conversion and direct loss of habitat values for these species. The project incorporates a Giant Garter Snake Habitat Enhancement Plan to compensate for this loss of wetland habitat.

WSGI has applied for a Clean Water Act Section 404 Permit for the placement of fill within wetlands and would also obtain all necessary permits from the RWQCB to authorize the placement of such fill. WSGI shall finalize and implement the project's Wetland Restoration and Monitoring Plan to meet with the approval of the US Army Corps of Engineers (ACOE), in consultation with the CDFG and the RWQCB. The Plan would provide for re-establishment, enhancement, and/or replacement of wetland habitat and vegetation. It is not anticipated that the proposed project would contribute to cumulative impacts to biological resources in the area, due to the implementation of the biological mitigation measures.

CULTURAL RESOURCES

It is not anticipated that any cultural resources would be impacted by the proposed project, as described in Section 3.5, Cultural Resources. WGSI would implement mitigation measures as part of the project to reduce potential impacts to a less than significant level. The proposed project would not contribute to cumulative impacts on cultural resources.

GEOLOGY AND SOILS

As described in Section 3.6, Geology and Soils, project construction could result in changes in topography and aggravation of unstable soil conditions as a result of excavation, grading, or fill. Surface disturbance associated with the road building, drilling, and Well Pad Site construction would contribute to erosion, soil compaction, and soil loss in the project vicinity. Pipeline installation activities would also result in ground disturbance and potential for erosion. This surface disturbance would primarily be associated with construction activities and would be temporary and mitigated through effective erosion control measures included as part of the project. Similarly, each of the other projects discussed in this section include implementation of mitigation measures to reduce potential impacts to soil loss in the project area. It is anticipated that overall impacts associated with soil disturbance would be minimal and mitigated to a less than significant level for each of the projects discussed above. With implementation of mitigation measures included as part of the proposed project and required under permit conditions, cumulative impacts to geology and soils would not be significant.

HAZARDS

The proposed project would introduce potential hazards to residences in the project area as described in Section 3.7, Hazards. As additional reservoirs are used for natural gas storage, the possibility of potential gas leakage through and around old abandoned wells increases. Over time, land use may change allowing construction of additional buildings and structures. Through implementation of mitigation measures discussed in Section 3.7, minor increases in the potential for storage gas leakage through man-made pathways and accumulating inside buildings and structures would be less than significant.

As discussed above, the Venoco project involves the use of an explosive charge buried in a 30-foot deep hole as the energy source for recording seismic data in the project area. The survey crew will position source points for recording data to avoid sensitive resources such as houses, pipelines, wells, levees, etc. The geophysical contractor will contact a utility locator prior to initiating survey activities to determine the location of buried utility lines. The Venoco project would induce small-scale seismic shaking that would be undetectable to observers beyond 100 feet from each shot point. Venoco will place detonation source points at safe setback distances from buildings and residences in the project area.

It is expected that the Venoco project would be completed prior to the start of WGSI construction activities that could potentially overlap with the Venoco project (primarily construction along the Line 400/401 Connection Pipeline). Although exact construction schedules are uncertain for both the Venoco Project and the proposed WGSI project, WGSI would coordinate with Venoco to avoid potential hazards associated with overlap of construction activities. The potential for hazards related to the proposed project are not expected to contribute to a cumulative increase in safety risk to individuals living in the vicinity of the proposed project.

HYDROLOGY

The proposed project would utilize local surface water during construction for dust control and hydrostatic testing of the pipelines, as described in Section 3.8, Hydrology. Most of the potential hydrology impacts would be associated with pipeline construction. They would be temporary in nature and not considered cumulative. Potential flooding

impacts would not differ substantially from existing conditions. Project implementation would not result in a measurable increase in potential flood related hazards. The proposed project is not expected to result in cumulative effects on hydrology in the project area.

LAND USE

As described in Section 3.9, Land Use, the proposed WGSI project would be consistent with General Plans for both Butte and Colusa Counties. Although the project would contribute to the cumulative conversion of agricultural land into other uses, as described above, the proposed Project would be consistent with land use plans and therefore not contribute to cumulative land use impacts in the area.

NOISE

The proposed project is not expected to contribute to cumulative impacts on ambient noise levels in the project area, as described in Section 3.10, Noise. Each of the proposed projects discussed in this section would be located in relatively remote areas of Colusa and Butte Counties. Most of the facilities associated with each project have been sited in areas characterized by industrial facilities. Each project would employ noise control measures to reduce noise impacts to less than significant levels.

Drilling activities associated with the Venoco project could occur simultaneously in the project area and may combine with the proposed Project and result in elevated noise levels in the area. WGSI would coordinate with Venoco to reduce overlap of construction and drilling activities to minimize increases in ambient noise levels in the Project area. The project would not contribute to cumulative noise effects in the project area.

POPULATION AND HOUSING

Population influxes associated with construction activities would be temporary, as discussed in Section 3.11, Population and Housing. This is common among the projects discussed in this section. The principal influx in population would be associated with construction activities and would be temporary. The Venoco Project would employ approximately 60 to 70 persons during the project implementation of two to three months and would not involve permanent relocation of workers to the project area. As shown in Table 3.11-2: Communities Within Commuting Distance (70 Miles) of Project Construction, there would be an adequate number of temporary housing units available in the area for workers commuting to the area. The project would not contribute to cumulative effects on population and housing in the project area.

PUBLIC SERVICES AND SOCIOECONOMICS

As described in Section 3.12, Public Services and Socioeconomics, impacts to public services and socioeconomics related to each of the four projects would be primarily temporary and considered less than significant. It is anticipated that public service ratios and response times would not be significantly impacted by the projects. There would be sufficient capacity to accommodate any increases in demand for public services associated with the projects discussed in this section. The project would not contribute to cumulative effects on public service capacity in the project area. Potential impacts to the local economies in the project area would likely be beneficial to the various communities by introducing temporary employment into the area. The project is not expected to contribute to cumulative adverse impacts to socioeconomics in the project area.

RECREATION

Construction impacts may temporarily affect hunting and wildlife viewing opportunities in the project area, as discussed in Section 3.13. WGSI would minimize potential impacts to these recreation activities by coordinating their activities with the USFWS, Gray Lodge, and property owners to limit its impacts to conservation easements and provide compensation during the 20-month construction period. Through implementation of WGSI Measure 3.13-1, impacts to existing neighborhood and regional parks or other recreational facilities resulting from the construction or operation of the proposed project would be less than significant. Due to the temporary nature of construction activities, the proposed project would not contribute to cumulative impacts on recreation in the project area.

TRANSPORTATION

As described in Section 3.14, Transportation, potential cumulative transportation impacts would primarily be associated with overlapping construction activities and would therefore be temporary. The Venoco Project area overlaps the eastern portion of the proposed WGSI project area. The Colusa Power Project would be located in the project area just west of the Delevan Interconnect Site. Cumulative impacts to local roads, both in terms of traffic and surface impacts, would be short term, but potentially significant. WGSI would work closely with Venoco and Colusa County to develop a construction access plan addressing timing and routes that minimizes traffic impacts on local roads, and ensure that road surfaces are returned to pre-construction conditions following construction. WGSI would coordinate with other projects to avoid heavy congestion on local roads during construction activities. By closely coordinating with the Colusa County Public Works Department, potential cumulative transportation and traffic impacts would be less than significant. The proposed project would not contribute to cumulative effects on transportation in the project area.

UTILITIES

As described in Section 3.15, Utilities, the construction of new canals and other drainage facilities would be performed by WGSI in accordance with existing grading and drainage plans (see also 3.8 Hydrology). With implementation of these measures, potential impacts would be reduced to a less than significant level. The proposed project would not contribute to cumulative effects on utilities in the project area.

4.4 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines requires preparers of an EIR to consider the growth-inducing impacts of a proposed project. Section 15126.2(d) states that the EIR should:

> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth.

The proposed project would result in expansion of an underground natural gas storage facility. As discussed in Section 3.11 Population and Housing, population influxes during construction activities would be temporary. Project operations would only result in the addition of four additional permanent employees. It is not anticipated that the proposed project would have growth-inducing impacts in the area.

POTENTIAL TO INDUCE POPULATION GROWTH

Project Study Area

As noted in Section 3.12, Public Services and Socioeconomics, up to 303 construction workers would be required during the 20-month construction period, only 80 of which would be non-local. Because these non-local workers will be in the area only for the duration of their particular phase, they would not become permanent residents. Project operations would require only four additional staff for the proposed expansion; therefore, the project would not directly induce population growth in the area.

The project would require materials, supplies and services from local vendors both during construction and operations. Expenditures during operations are expected to be approximately $300,000 per year. This demand for supplies and services would be adequately served by existing businesses without significant expansions and/or additional staff. The proposed project would not remove obstacles to or induce population growth within the project area.

Outside the Project Study Area

Population growth outside the project study area would only occur if a particular gas storage customer, by virtue of gas storage, were able to remove some barrier or obstacles to population growth. The CPUC is not aware of any customers that would construct new facilities as a result of the proposed project. One of the purposes of the proposed project is to promote competition in the marketplace. The natural gas storage industry typically serves large industrial customers or power producers. These entities typically do not possess a role in regulating, encouraging or discouraging population growth. The proposed project would not remove obstacles to or induce population growth outside the project area.

POTENTIAL TO INDUCE ECONOMIC GROWTH

Project Study Area

Both Butte and Colusa Counties have relatively high unemployment and relatively low per capita income, as discussed in Section 3.12, Public Services and Socioeconomics. During project construction, the need for local specialized workers may provide a short term reduction in unemployment and increase in per capita income. Once operational, the project would continue to support secondary local employment in its need for materials, supplies and services from local vendors, with expenditures.

Because construction expenditures would be short-term, they would not be expected to induce economic growth in the area. Expenditures for supplies and services during project operations may promote limited local economic growth in the Gridley/Live Oak/Yuba City area, but that growth would not be significant. Property tax payments to the two counties would be directed primarily to school districts in the immediate project area to

support their current programs. It is not expected that these tax payments would induce local economic growth. The proposed project would not remove obstacles to or induce economic growth within the project area.

Outside the Project Study Area

It is not expected that the proposed project would induce growth outside the project area. As discussed in Section 2, Project Description, the proposed project would provide benefits to natural gas customers by providing (a) increased reliability; (b) increased availability of storage in California; (c) the potential for reduced energy price volatility; and (d) the potential for reduced need for gas transmission services. Despite these potential market benefits associated with competitive gas storage, it is not expected that the proposed project would remove obstacles to growth or induce population growth outside the project area.